QLToday

Volume 6
Issue 6
March/April
2002

ISSN 1432-5454

The Magazine about QL, QDOS, Sinclair Computers, SMSQ...

NOW PLAYING IN THE QL THEATRE!

Q60 released by D&D

Back on Stage SMSQ/E

Contents

3 Editorial

4 News

9 Obituaries

10 A Diet of Mice — *Geoff Wicks*

11 QLers Do It With... — *Dilwyn Jones*

12 Gee Graphics! (on the QL ?) - part 27 — *H L Schaaf*

23 QPCPrint - or how to invent the wheel again — *Ewald Ikemann*

23 Running QPC2 from CD — *Dilwyn Jones*

27 QL Cycle Trail — *Tony Firshman*

29 An Apple a Day — *Jim Hunkins*

32 Programming the Pointer Environment in C - Part 2 — *Jerome Grimbert*

39 Q60 - a review — *Wolfgang Lenerz*

44 We're moving again — *Marcel Kilgus*

46 SMSQ/E Source Code to be made available — *Wolfgang Lenerz*

48 Clocking On (Part 2) — *David Denham*

55 Hove Workshop 2002 — *Bruce Nicholls*

56 Bringing scrap and stuffer together — *Marcel Kilgus*

58 Byts of Wood — *Roy Wood*

Advertisers

in alphabetical order

Peter Graf 31, 49
Dilwyn Jones 53
Jochen Merz Software 37
QBox USA 41
QBranch 16, 17
Quanta 43
RWAP 57
W.N. Richardson (EEC) 25
TF Services 45
Geoff Wicks 41

QL Today

ISSN 1432-5454

German office & Publisher:

Jochen Merz Software
Im stillen Winkel 12
47169 Duisburg
Germany

Tel. +49 203 502011
Fax +49 203 502012
Box1 +49 203 502013
Box2 +49 203 502014
Mobile +49 1701 222277
email: JMerz@j-m-s.com
email: QLToday@j-m-s.com

English office:

Q Branch
20 Locks Hill
Portslade
BN41 2LB
United Kingdom

Tel. +44 1273 386030
Mobile +44 7836 745501
Fax +44 1273 381577
email: qbranch@qbranch.demon.co.uk
email: QLToday@j-m-s.com

Editor:

Dilwyn Jones
41 Bro Emrys
Tal-Y-Bont, Bangor
Gwynedd
United Kingdom LL57 3YT

Tel. +44 1248 354023
Fax +44 1248 354023
email: dilwyn.jones@dj.softnet.co.uk
email: QLToday@J-M-S.com

Co-Editor:

Bruce Nicholls
57 Shaftesbury Rd
Romford
Essex RM1 2QJ
United Kingdom

Tel +44 1708 755759
Fax +44 870 0568755
email: qltoday@q-v-d.demon.co.uk
email: QLToday@j-m-s.com

QL Today is published bi-monthly, our volume begins on beginning of June. Subscriptions begin with the current issue at the time of sign up. Please contact the German or English office for current subscription rates.

We welcome your comments, suggestions and articles. YOU make **QL Today** possible. We are constantly changing and adjusting to meet your needs and requirements. Articles for publication should be on a 3.5" disk (DD or HD) or sent via Email or into one of the JMS-BBS's. We prefer ASCII, Quill or text87 format. Pictures may be in _SCR format, we can also handle GIF or TIF or JPG. To enhance your article you may wish to include Saved Screen dumps. PLEASE send a hardcopy of all screens to be included. Don't forget to specify where in the text you would like the screen placed.

Article and Advertising deadlines are as follows:

Issue 1: 30 April	Issue 2: 30 June
Issue 3: 30 August	Issue 4: 30 October
Issue 5: 30 December	Issue 6: 28 February

QL Today reserves the right to publish or not publish any material submitted. Under no circumstances will **QL Today** be held liable for any direct, indirect or consequential damage or loss arising out of the use and/or inability to use any of the material published in **QL Today**. The opinions expressed herein are those of the authors and are not necessarily those of the publisher.

This magazine and all material within is ©copyright 2000 Jochen Merz Software unless otherwise stated. Written permission is required from the publisher before the reproduction and distribution of any/all material published herein. All copyrights and trademarks are hereby acknowledged.

Editorial

Dilwyn Jones

This issue brings to a close the sixth year of publishing QL Today. I am pleased to have been involved for all six of those years and enjoyed every part of it (except for when Jochen keeps asking me for ideas for magazine covers, which I hate and usually refuse to do!). I recently started a new job and after a while found out that even that had a connection with QDOS - see the QDOS In Hospital news item.

Things seem to be getting better and better for the QL recently.

The Q60 has been launched and take up has been very good. It's the fastest QL system ever with its 68060 processor at up to 80 MHz and HUGE memory capability - it can have more RAM than most QL users will have needed in hard disk capacity! D & D Systems reported exceptional interest in the computer when they attended the Portslade Quanta Workshop and the news just seems to get better and better - a software bundle can be included with it, there's the prospect of CD writing from SMSQ/E for Q60 in a few months, compact flash memory adaptors...when's Christmas? I want someone to buy me a QL Dream Machine!

SMSQ/E is starting to open up a bit. It was decided at the recent Eindhoven QL meeting that SMSQ/E development could be given a boost by making it a bit more open. Tony Tebby has agreed to this development and is willing to supply the sources (roughly 1800 source files, 2.5 MB zipped, 5.5 MB extracted) to anyone who thinks he/she can develop the system. A registrar (Wolfgang Lenerz) has been appointed to co-ordinate matters and ensure that the official SMSQ/E distribution includes features that are tested and reliable and work across all platforms which run SMSQ/E. SMSQ/E will remain available from the usual suspects (including Roy Wood at QBranch and Jochen Merz) and the retail price of SMSQ/E will include the usual support, commercial development and so on. The co-ordination of effort is more important than it might seem, since there could be no worse development than a number of 'unofficial' SMSQ/E versions which fail to run on many systems. Marcel Kilgus, who developed the QPC version of SMSQ/E, will continue to work on SMSQ/E - he is committed and enthusiastic and the person who has the next best knowledge to Tony Tebby himself of SMSQ/E. This development will allow SMSQ/E to remain a commercial product that you can get the usual friendly QL technical support for, but will open matters up by allowing just about anyone to contribute to its development by obtaining the sources. More from Wolfgang Lenerz about this elsewhere in this issue.

QPC2 has also matured recently. I wrote an in-depth review of the latest v3.02 (at the time of writing!) for Quanta newsletter and amazed myself at how it has changed since the early days once I actually sat down and forced myself to write it all down! Between the Q60 and QPC2 we have two genuinely superb QL platforms to push us into the years ahead. The Q60 is every bit a dream machine, while QPC2 is obviously an emulator so provides an excellent way ahead for those of us whose desktop unfortunately has to be occupied by the P* machine.

The "colour drivers" (GD2 - Graphic Driver 2) is now well established for Q40, Q60, QPC and QXL and starting to gain some real applications. Several exist for Q40 (many can be obtained from Claus Graf's Q40 website). I had the pleasure to test Wolfgang Uhlig's QcoLour program recently, a real aid to handling the colour values concerned for those writing programs which make use of the new colours. Roy Wood and others also report being well impressed with this program - more details in the news pages.

As we were compiling the news pages for this issue we noticed that there seemed to be more material than ever, it certainly took me a while to type them up in the first place! It seems to be a good time to be involved with the QL - with everything seeming to go in the right direction, albeit a little slowly in some cases! Rather less good news is the closure of the German issue of QL Today. While this is obviously not good news, it does mean we can dedicate the time and effort solely to the English issue now to make that even better!

"...but when he invited me back to his place to see his hardware, I didn't realise he meant his QL, his Aurora, his Q60.....!?!"

NEWS

SERNET on QDOS?

I (Dilwyn) have now put a copy of the SimSer extensions to allow one directional serial port operation with SMSQ/E style SRX and STX devices onto the Other Software Page on my website. The software is roughly a 24KB zip file download, with documentation in English (SimSer_doc) and German (SimSer_txt). The author of the extensions is Hans-Peter Recktenwald. Hope this helps those who might like to try Sernet on a QDOS system.

http://www.soft.net.uk/dj/software/other/other.html

Also available on disk from most PD library services.

Malcolm Lear Extensions

Malcolm Lear's CD (Change Directory) and redefined EDIT command (allowing EDIT 'name' so that EDIT can call a proc or fn definition line directly) extensions are now available from my website's Other Software Page on:

http://www.soft.net.uk/dj/software/other/other.html

Also available on disk from my PD Library service for those unable to download files from the internet.

SMSQ/E Situation

Following some discussions on the future of the SMSQ/E version of our favourite operating system, a meeting was convened at the March Eindhoven QL meeting (in The Netherlands) of interested parties to discuss the future of SMSQ/E and the possibilities of it becoming an 'open' or 'free' system rather like some other operating systems out there. Tony Tebby (author of SMSQ/E) has agreed to the proposals made.

Whilst Tony Tebby will retain copyright over the code, anyone may have a copy of the source code and modify it and give it away for free. Free must mean free, no charges whatsoever, even media charges or copying fees. There will also be an official version of SMSQ/E that will be maintained by a registrar (Wolfgang Lenerz was appointed registrar) and be sold by 2 people, namely Roy Wood (QBranch) and Jochen Merz. Support for this official version will be part of the price.

The purpose for the official version is to make sure, as much as possible, that any change to SMSQ/E for one machine (e.g. Q60 or QPC) will percolate down to all other machines (e.g. QPC, Q40, QXL etc...) as fast as possible, in an attempt to make sure that we have one single version with the same features (hardware permitting) for all machines.

Currently, the main developer of SMSQ/E seems to be Marcel Kilgus, the developer of the QPC2 emulator. He has been enthusiastic about this move to allow others to develop SMSQ/E by allowing free distribution of sources, and apart from Tony Tebby he is probably the individual with most knowledge of SMSQ/E. Clearly, he would be looking for any assistance possible with the project. Others with an interest include Joachim van Der Auwera at PROGS in Belgium, who is the author of the Prowess windowing system, which provides the enhanced window manager capabilities, scaleable fonts and so on. Prowess is also now freely distributable.

Any change made by anybody may be proposed to the registrar for inclusion in the official version. Further details from Wolfgang Lenerz elsewhere in this magazine.

News from RWAP Software

The update for **Release 4 of the Reference Manual** is now available - this details how to write programs to use the Extended Colour Drivers on Q40/Q60/QPC/QXL etc... and even info on how to program Aurora's 16 and 256 colour modes... Cost 6 pounds.

Q-Index (now v1.05) and **Q-Help** (v1.06) have been updated to reflect the latest changes. Both cost 1 pound each to update - send disk and SAE

ProWesS ESC/P2 Drivers have also been updated to v1.04 to fix problems on Epson 900 and 720 dpi printing... Just send a pound plus your disk and SAE to update.

Finally, is there anyone willing to spend a little time sorting out the graphics for a new game soon to be released - if so, let me have your usual (slow)mail address so I can send a copy of the game for you to look at (all offers considered).

New RWAP Software Website

I have created a short web-page for RWAP Services. It is at

http://hometown.aol.co.uk/rwapsoftware/index.html

Editor 2000 V3.06K

Mark Knight has just issued V3.06K of The Editor (originally from Chas Dillon), along with the source files.

This version addresses a slight anomaly when running in SMSQ/E systems and QDOS with PE, when resizing or moving the Editor window. George Gwilt made the suggestion for changes to the code and although his suggestion had to be modified slightly by Mark Knight to work properly with older systems, it does work well.

The new release may be downloaded from:

http://www.soft.net.uk/dj/software/other/other.html

Please note that editor.zip (the binaries and documentation) is just over 210KB in length, while the editrsrc.zip (source files) file is nearly 170KB in length - anyone not wishing to download files of this length from a website can also obtain them for £1 each on disk from my PD library service (Dilwyn Jones).

uQLx on a RISC PC?

Rumour department: Apparently Dave Park, a former Sandy UK PCP employee, has the uQLx emulator running on a RiscPC. I did not have full confirmation at the time of writing, but if anyone requires more information, further details may be obtained from Dave Park on the email address

dexter@spodmail.com

QDOS in Hospital

"Keep the editor happy" paragraph...

In January I started working for a company called Patientline who install bedside TV/radio/telephone etc units in hospitals in the UK and The Netherlands. Nothing unusual in that until a well known QL personality pops up on email saying he had been involved in the original software design for these systems, and originally they had 68008 processors running a derivative of QDOS designed by none other than some of the team known to the QL world as the QView Mega Corporation a few years ago.

Seems the QL just keeps following me around wherever I go...or is that the other way around?

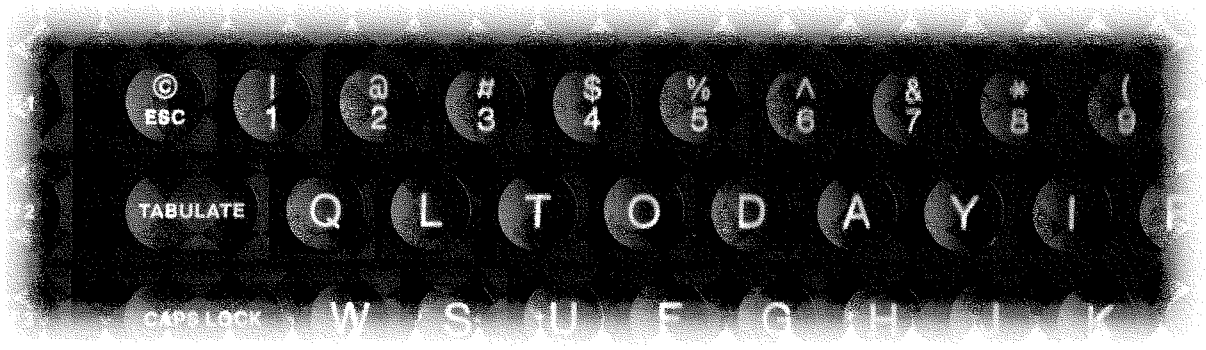
Q60 NEWS from D&D Systems

You may already have seen in the QL press that the Q60/Q40i are now in production by D&D Systems (Derek Stewart and Dennis Smith). They are looking to supply a full hardware and software solution with the Q60/Q40i. The hardware is supplied ready built into a midi tower case case with a choice of Q60/Q40i CPUs ranging from 40Mhz - 80Mhz, with ram up to 128mb. The software to be supplied with the system will consist of high quality QL software that is verified to run on the Q60/Q40i. A software deal has been secured with Jochen Merz to provide pre-installed software to the customer for each complete Q60/Q40i system. This would include Qpac1, Qpac2, Fifi, QD and all the free stuff like ProWess, menu_rext, etc. maybe about 20 programs installed, configured and ready to go. This would be the first time since the launch of the QL in 1984 that QLers have a plug in and go system. This offer would only be open to people who have bought a Q60/Q40i system from D&D Systems.

While talking about the Q60, who apart from me noticed that that the Q60 and specifically D & D Systems got a good mention on page 75 of the 7th March 2002 issue of Micro Mart magazine. Good news - if Micro Mart can bring themselves to do this, then surely other computer mags could too.

QL DVD?

Visitors to the Hove Quanta workshop in March would have seen a pair of suspicious looking characters wandering around with video cameras. Although that sounds rather sinister, it was really just Steve Reyal and Darren Branagh who have embarked on producing a video all about the QL with the long term aim of trying to use it to promote the QL.



Attention !

This is the last issue of volume 6

If you have not already re-subscribed please do so promptly.

This will help us to avoid the extra cost involved in sending out reminders and also allow us to print the correct number of copies for the first issue of volume 7,

We hope that you have enjoyed reading the magazine over the past six years and that you will be staying with us. We are always happy to receive comments and suggestions from our readers.

Please fill in the enclosed form and return it to your usual vendor.

Thank you for Your continued support.

Steve Reyal takes up the story (quoted from the QL Users Email Mailing List):
"The DVD will not be region-limited, so there'll be no drive-RPC-lock issues to contend with. And there'll be no CSS/Macrovision encoding or anything so frustrating either. We're not making a Hollywood blockbuster after all! (- though the thought of Q-Celt subliminal advertising has been considered)
"PAL/NTSC is an issue however. Yes, if you're using a computer system to play the material back, then the television standard isn't normally a problem. All good software DVD players and decoder cards should be able to switch quite happily for an unrestricted disk. But it is for those who might want to play the disk in their set-top boxes, outputting to their domestic televisions, that we must produce two versions. Wouldn't help the American QLers if all we did was a PAL disk now, would it?
"We're shooting in PAL, on a mini DV camcorder - even at the US event in Washington DC, if all goes to plan. And we'll still have to standards-convert to produce a DVD for the people over there, FOR the people over there! It's not a problem, however, as it will be handled as part of the MPEG-2 encoding process.
"As far as QL playback is concerned..... you're all more qualified than I am to say how it can be done. Without dedicated MPEG-2 decoding hardware, I have grave doubts as to the ability of anything other than a Q40/60 or rapid QPC-based system to handle the MPEG-2 throughput. And as for the programming...! I'm not, by any stretch of the imagination, the right person to answer this.
"Any enquiries about the DVDs should be made to myself or Darren. Any suggestions on features, menu-design, imagery and stuff you might want to see included, then let us know and we'll see what we can do. The main editing/authoring push will start just after the Manchester Quanta AGM, though we hope to have the layout finalised, and menus/included software prepared before then."
Steve Reyal
steve@misteravid.com misteravid@hotmail.com

SOQL Progress Report

Becoming rather frustrated with the lack of news of progress on the soql internet access system for the QL, I begged its author, Jon Dent in Switzerland, for news. Here's what he wrote:
"I am still active (developing soql). I've been bogged down with trying to get Linux working with two serial ports on my Notebook. I need to be able to test both ends of the connection and I think soql on uqlx talking to linux over two ports will be the most convenient (and nearest to reality) way to test. Only trouble is my serial port (only have one) is permanently asleep. I bought a USB-Serial converter to try and it worked with Linux if I didn't mind the Baud rate being wrong. I couldn't get the built in port to work anymore so I bought another USB-Serial converter of another make (i.e. BAFO). It didn't work at all on Linux. Looking through the mailing lists I realised I needed a newer kernel. My attempts to compile one led to me completely frying Linux because the disk space ran out in the middle. I had to re-install. About this time the new Red-Hat distribution. came out so I re-partitioned my HD and installed it. Unfortunately although there was a newer kernel the BAFO still didn't work. After some email exchanges with the author of the driver who was very helpful we came to the conclusion that my kernel was still too immature. I've now obtained, compiled and installed a new kernel and both USB-Serial ports are working properly (baud rate inclusive). I've installed Richards latest uqlx (thanks Richard it's great) and soql is reinstalled and I'm ready to go. This takes us up to last weekend. I'd get most of the PPP stuff put into soql before this escapade but it wasn't working, hence the need for the linux installation. I don't like to predict when I'll be finished but I am actively pursuing my goal."

Change of Website Address

Phoebus Dokos has told me that his QL website should have moved to its new address by the time you read this:
The provisional QL page is moving from **http://www.redoak.net/QL/proforma.html** to **http://www.dokos-gr.net/~phoebus/**
Dilwyn Jones's USA website mirror will be moving to: **http://www.dokos-gr.net/~dj/**
The main page will be at:
http://www.dokos-gr.net/
Phoebus's new email address will be
phoebus@dokos-gr.net

Frank Davis

Frank Davis (a past US QL Trader, who traded as Mechanical Affinity with Paul Holmgren and later as FWD Computing) and wife Carol were involved in a very serious car accident in February and were both in intensive care for a while as a result of their injuries.
Their vehicle and its software contents were a total loss. they were on their way to an AGI Show in anderson when they were struck by a Viper vehicle whose driver was also seriously injured.
QL Today would like to extend our best wishes to Frank, Carol and family for their recovery and to express our thanks to Frank for the years of tireless service he gave the QL community in America.

Q-CELT Computing News

I have a large collection of reconditioned PC's to be disposed of (they are ex bank stock, reformatted and Windows 95/98 installed which I got cheaply from my employers). They are low end Pentium Processors (100 to 200Mhz) but ideal for a cheap

machine to run QPC or Q-Emulator on. They also have QPC demo versions installed so you can get an idea of the speed etc.
As these machines are heavy and cumbersome, if you are interested in one, PLEASE contact me PRIOR to a QL show to arrange for me to bring some over for you. I have a full spec list so can go through what will suit you privately. Email, Fax or phone me for full details. These are quite cheap, so call if you need one - they make great backup machines.
Version 1.20 of the QL Emulators CD should be available by the time you read this. It includes an updated version of the uQLx emulator from Richard Zidlicky and the free software section includes many updates to programs such as the Turbo Compiler and Editor 2000. The Famous Faces CD-ROM, a collection of Line Design cartoon style clipart of famous people to illustrate your documents, is finally available. The clipart is regrettably too large to supply on floppy disks.
Progress on other projects in the preparation stage has been slow largely thanks to Dilwyn's other commitments (new job, QL Today, PD library...) but projects ongoing include a large collection of Proforma/Prowess fonts from Dilwyn and Phoebus Dokos and a new pointer driven program launcher desktop program from Dilwyn, an alpha test version of which was demonstrated at the Hove Quanta Workshop.

Q-Celt are now agents for Phoebus Dokos in Europe!! We are selling the Compact Flash adapters (both the "vanilla" one and the slightly more expensive hot-removable one) on his behalf, in order to save on individual postage to people from the US where phoebus is based. We are still looking for the best deals for bulk postage and pricing, but expect the prices to be about 15 pounds sterling for the ordinary CF adapter and 25 pounds for the hot-removable ones. These are very keen prices - expect to typically pay in the region of twice this in the UK for similar products!!
The CF adapters work on the Q40/60 (they were displayed recently by D&D systems at the Hove Show in March) and will also work with QubIDE systems and of course QPC.
We are still working on producing an Encyclopedia for the QL from freeware sources - This should speed up now as I have left my former job as a Sys Admin for a major Irish Bank and will therefore have a bit more time on my hands now (hopefully!) We are also looking for new ideas for our growing range of CD-ROM's for the QL - if you have an idea, let us know and we will try to turn it into a reality!

Most of you by now will be aware of the the fact that I am leaving my current job (a Sys Admin for the the Bank Of Ireland) and will be running a new business of my own (a computer training centre/internet and email shop).

Therefore, as from Thursday 28th March, at 5pm, my email at:
darren.branagh@boimail.com
will cease to exist. I have organised a new email facility in the meantime via my new business, Wicklow Web Centre:
My new email addresses will be:
darrenb@esatlink.com (private address)
or
wwc@wwc.ie **wwc@esatlink.com**
(please mark emails to these 2 addresses for my attention only as 2 employees will access these too!)
My Hotmail addresses will also be kept active (a lot easier if it wasn't for the spam)
darrenbranagh@hotmail.com
qceltcomputing@hotmail.com

TURBO News

Turbo Compiler version 4 release 14 from George Gwilt is now available from the usual Other Software Page on my website.
Changes in release 13 and 14 include:
1. Minerva integer tokenisation now compilable
2. The configured Report file is now used (previously ignored)
3. The version number of Parser_Task is now conveyed to Codegen_Task, which avoids the need to update Codegen_Task just to update version numbers when the only change needed is in Parser_Task.
David Gilham has also release Turbo Toolkit version 3.32.
There have been the usual bug fixes and some distribution changes. Eg CHARGE now works properly and some niggles with TYPE_IN have been fixed. Also a new function BASIC_ADR has been introduced.
http://www.soft.net.uk/dj/software/other/other.html

QL CHAT

Dave Park has created a sort of newsgroup by email, called QL Chat. Its intention is to allow free discussion by people interested in QLs, but not necessarily on subjects directly related to the QL.
It came about because a number of discussions on the main ql-users mailing list branched off onto non-QL topics which upset some of the list members. This new list allows such spin-off chats to continue on a separate mailing list so that it is not forced onto those who do not wish to receive non-QL mail. So you only subscribe to QL-Chat if you want to follow these spin-off discussions. Such mail is sent to:
ql-chat@lists.spodmail.com
You can subscribe by sending an email with: **subscribe ql-chat ‹address›** in the body to: **majordomo@lists.spodmail.com**

It'll have a charter something like "This is for free discussion by people interested in QLs, but not necessarily about QLs."
Dave has finished the preliminary work, and feels the website he's been working on is now ready for some public viewing.
http://ql.spodmail.com/
You'll find it has a variety of sections that are currently empty - he is working on content right now. It also has a quite powerful forum where you can post about almost anything...
The site will be refined and developed over the coming months, so if you have ideas or suggestions, now is the time to let Dave know.
Dave Park **ql.spodmail.com dexter@spodmail.com**

Norman Dunbar's Website

Norman has been busy adding more QL documentation to his website.
Does this man ever take a lunch break from his QL?
Latest additions are : More trap 1 stuff and examples, common and user heaps explained, etc.
http://www.bountiful.demon.co.uk/qdos/index.html

ETHERIDE

Dave Park writes:
The EtherIDE Ethernet board is coming along slowly. Devices have been selected and layouts discussed. This will be a very busy little board, with overlaps and a few engineering challenges. The provisional spec is quite impressive, but we may have to drop one of two design options that conflict because of the amount of space they take up.
Remember, this board will mimic, and be software/driver compatible to the Goldfire board, as far as that is possible to do with a machine that's still being developed.
Sorry I've been a little quiet lately, I've been concentrating on matters closer to home. Now those matters are behind me, I will be devoting more time and energy to this project with Nasta.
If anyone has any questions or ideas, they can email me privately.
dexter@spodmail.com

Jim Hunkins News

Jim Hunkins, who is developing the QDT desktop system for modern QL systems, has written to let us know more about his website, where you can get more information about the progress of QDT and so on.
Jim is setting up a subscription list for website updates for **jdh-stech.com**, specifically for the QDT (QL Desktop) project. If you would like to subscribe to this list, please just send an email from the account to which you want the update emails sent to:
subscribe@jdh-stech.com

For those of you who have been asking what he has been working on at Apple for the last two years, check out the new "My Professional Life" page on his website. It now shows you two products that he was involved in for the last 2 years that are just now shipping.
http://jhunkins.prxy.com
» his actual home page
http://jhunkins.prxy.com/PAGES/APPLPROD.HTM
» direct link to new page

QWIRC by Per Witte

Qwirc is a hard disk management utility for - only for QPC2 at present - to mount and unmount QXL.win files and to set or rename the hard disk (as seen from SMSQ/E). It runs under the Pointer Environment, so should be less of a hassle to get to grips with than my previous offerings. The zipped package is about 40k.
It is available for download from
http://www.soft.net.uk/dj/software/other/other.html
It costs nothing, so don't be shy!

ProWesS News

There is now a new "downloads" page on the PROGS site (**http://www.progs.be/**) which includes links to all the files.
The version I uploaded is also slightly modified. There is now proper support for the euro character. (Unfortunately, this does mean that the fonts need to be rebuilt, as you now get the euro character when you ask for \paragraph\).

QCDEZE and CSB

Thierry Godefroy writes:
Duncan Neithercut just sent me a utility that for sure will be GREATLY appreciated by Q40/Q60 and SGC+Qubide users!
It's name is "QCDEZE" and it is to be used as a front-end to my CDROM device driver. It is PE driven and allows you to browse, copy and "execute" (via FileInfo II) files present on an ISO-9660 CD-R(OM/W). I could not test it myself as my Q60 is in France (and I am not) but it apparently makes use of the proper methods to take the largest benefits from the existing CDROM driver features (it must be very fast when compared to qxltools for example).
QCDEZE is available from the QDOS/SMS repository at: **http://smsq.free.fr/#DISK**
Note that Duncan also updated his CSB (Clip Scrap Board, now at v2.18) utility: it now works on almost all QL-compatible systems and should cope with any screen resolutions (available into the "generic utilities" section of the repository).

News from Marcel Kilgus

I'm proud to announce the launch of my completely new web appearance. Its address is

http://www.kilgus.net/
and it contains all the latest news about QPC. The new pages are easier to maintain and therefore there is a good chance that I really will keep them up-to-date (beside the fact that I like how they turned out which was not true for my old page).
To all web masters out there linking to my site, please update your links, I have removed the old page.
By the time you read this, QPC2v3.02 should be available.
A bug in the DOS device iob.smul routine, which for example could cause problems for someone trying to zip a file direct to a DOS device, has been fixed.
A number of other minor changes have been made, but the most significant is probably exchanging the old beeper emulation (which used the PC speaker) with a new one that uses Windows' DirectSound interface. This way NT/2000/XP now have full beeper support, too! I've decided to use a square waveform but with rounder edges which is a good compromise between the original "hard" sound and "save the loadspeakers" ambitions. The exact frequencies and timings were measured using a Hermes fitted QL. The algorithm is based on tests and on an original 8049 disassembly. All parameters including "fuzzy" and "random" are now supported. This means you can now have control over the speaker volume, rather than just struggling to hear the old system speaker where this existed.

QLAY News from Jean-Yves Rouffiac

Just to let you know that a new program - QLAY-Config/2 - is available for download from my web site
http://www.westhaven.uklinux.net/qwertyb
This is an OS/2 application that provides a GUI front-end for creating/maintaining the QLAY emulator's configuration file. I appreciate that this may be of limited value, but as the DOS version of QLAY is the only emulator option for OS/2 users, there may be some interested people - who knows?)

QCOLOUR from Wolfgang Uhlig

After obtaining those fantastic bitmap extensions of Wolfgang Lenerz at the last Eindhoven meeting I took this chance to improve my small colour program a little bit. It's worth having a look at it, I think. It displays colours and skins using the GD2 (Graphic Driver 2) high colour modes. It was written on a QPC system - I am hoping someone will please test it on QXL, Q40, Q60 for me...
Hopefully the program will be available from various websites etc.
Further details from Wolfgang Uhlig on
wolwol@compuserve.com

JMS and QBranch News

Both JMS and QBranch are happy to announce that the price of all SMSQ/E versions has been dropped due to the fact of the changed status of license for SMSQ/E. Please check the ads of JMS and QBranch for the current prices.

JMS BBS

For those who dial into the JMS BBS from time to time - both numbers now end at the same modem. This had to be done because my new ISDN exchange only has 4 analogue ports left.

OBITUARIES

I.M.GAYE

John Gaye will be well known to many of us as the person who wrote the Radio Rallies column in Quanta for several years until his death in late 2001. John had been a regular at both Quanta workshops and his local sub-group, the Solent group. John was a keen Genealogist and dedicated to the QL.

FRANK MERRISON

Martin Wheatley writes:
Many of you may remember Frank Merrison. He unfortunately passed away this morning, 2nd February 2002.
He was an early and longtime member of the London Quanta Group as well as ClubQL International.
Whilst being no computer expert he was never less than enthusiastic and will be much missed.

STEVE PAPIEROWSKI

Another long time QLer, Steve Papierowski, passed away on 28th December 2001. Steve had suffered from Wegeners Disease for some time. He leaves a wife (Anne) amd two daughters, to whom we extend our (belated) sympathies.

JOE HAFTKE

19th September 2001 also saw the loss of another long time QL enthusiast, Joe Haftke. My abiding memory of him is sharing a software trader stand with him at QL shows over the years. Joe wrote a lot of QL software, much of which lives on in the Quanta software library. Joe had suffered a stroke some time ago, but continued his enthusiasm for the QL. Joe had started and run a local QL user group in the Sidcup area.

A Diet of Mice

Geoff Wicks

In the last issue of QL Today Roy Wood described his QL roadmaps in which he emphasised his taste for mice. Roy came to the Sinclair scene comparatively late (1985), bought his first mouse in 1987 and used it regularly from 1991, particularly for drawing stage plans.

My Sinclair experience is more traditional. My journey started in 1982 and progressed via the ZX81 and a Spectrum to the QL. I had about 13 mouseless computing years until 1995 when I bought a QXL card. Even then I did not use a mouse, because I had insufficient space for a mouse pad in my working area. When I eventually started to use a mouse, it proved to be unreliable and unstable. I tried all the usual tricks such as checking connections, reinstalling the software and adjusting the windows settings. The fault, when I finally tracked it down, was much more simple. There was a wheel in the mouse I had always missed in cleaning!

I suspect many QL users have a similar attitudes to mine. We grew up without mice so why do we need them? We QL-ers tend to have a black and white view of mice. We either love them or we hate them, just as we either love or hate the pointer environment.

One advantage of the QL attitude is that, unlike the PC world, our software has remained flexible. Most programs can be used with or without a mouse, but what I have missed in QL publications is a serious discussion of mice. When do they help us in our computer work and when do they hinder us? Two recent software projects have forced me to look at this question.

In his QL Today article Roy Wood described how the Icicle system allowed him to use a simple SuperBasic program to hack the Psion Suite so that some of its functions could be used with a mouse. Many QL-ers would applaud this. Some years ago in a QL publication QL users were asked for their top ten software wishes and near the top of the list was a pointer driven word processor.

This surprises me because by definition word processors are keyboard intensive programs. Unlike number crunchers, word processors can be "slow" programs because the computer usually processes the text faster than we humans can think and type. It is hard to see any area in word processing where using a mouse brings substantial benefits. All to often it acts as a distraction. The mouse's pointer is an obstruction on the screen which can block text or become confused with the program's cursor, and every time you use the mouse you have to take your hands off your main working tool, the keyboard. Can we honestly say that word processing operations such as setting margins, marking blocks of text, copy and pasting, and search and change are made simply and easier using a mouse?

Paradoxically the program where I find the use of a mouse essential, is also a word processor, although an unusual word processor as it is Japanese. Al Boehm, in his review of my program QL-RHYMES, wrote than whenever he has to stop to look something up in a paper dictionary he quickly loses his train of thought. He should count his blessings that he is not working in Japanese, which uses two phonetic alphabets and about 2000 Chinese characters.

The more complex Chinese characters are made up from about 200 simpler characters or radicals. To look up a character in a Japanese dictionary you first have to decide which part of the character is the core radical and count the number of strokes required to write it. You then have to count the strokes required to write the rest of the character and search through the list of characters using these strokes. It is a painstaking, time consuming process.

Computers have made the task much easier. If you do not know a character you call up a table of radicals and choose a couple or more that appear in it. The computer displays all the characters containing these radicals and you click on the one your want. If necessary you can look up the character in a dictionary to choose the word you want or look up the meanings of the character in the glossary.

A mouse is essential for the smooth operation of this program. It enables you to quickly move through the table of radicals and to flip backwards and forwards through the dictionary and glossary. An oriental word processor has a much stronger graphical and visual element than a western one.

Most of our programs lie between these two extremes, but at what point does a mouse become essential and at what point does it become a hindrance?

Of the two projects that have recently forced me to think about this question, one is being developed by another trader. Its structure has some

similarities to Wolfgang Lenerz's popular program "The Wall". I have never played this game, but I have seen others play it. Its strength lies in its speed, the smoothness of its action and the way it involves the user in quick decision making. It is almost tailor-made for a mouse.

But suppose this game was better played at a slower pace. Would a mouse be so essential? Would it increase or diminish ease of use or a player's pleasure? The program being developed is a word based program. Speed adds to its fun, but thinking time is more important. I find it difficult to assess whether or not a mouse would improve this program.

The second project will, if it is successful, become a Just Words! commercial program. Basically it automates and structures an analysis process that traditionally has relied more on the intuitive talents of the analyser. The nature of its task means it is a program where speed is irrelevant. It is software designed to be used slowly and thoughtfully.

The program resembles a large psychometric, psychosociological or market research questionnaire. You initially enter the details of your material for analysis and the program selects those parts of the questionnaire relevant to your study. You are then guided through a lengthy series of multichoice questions, and will often have to stop to study your research material.

Will this program benefit by being written for the pointer environment? Its nature means that navigation must be done by either the cursor keys or by a mouse. Will a mouse really improve the ease of use of the program?

In the last few years I have seen many professional market research programs using questionnaires similar to the one I am writing. Not one uses a mouse, and I wonder. Is it because of the professional reason that a mouse would hinder the operation of the program, or is it because most market research is done by cheapskate companies who frequently overload their obsolete computers on which they run outdated software?

Maybe in the QL community we need to take less of a black and white view of mice. When does a mouse help us and when does it hinder us in our QL work? How do you use your mouse?

QLers Do It With...

Dilwyn Jones

Time to lighten up a bit with these fun little 'car-sticker' type sayings.

Some you'll have heard before no doubt. Most are 'in-jokes' but if you've been reading QL Today and Quanta newsletter regularly you should understand them! Anyone able to donate any more?

QL users do it in black.

QLers do it in Quantum Leaps.

German QLers do it with Jochen Merz.

Super Gold Card users do it Miraculously.

Q60 users do it very quickly and colourfully.

Q40 users do it almost as quickly.

Q40 users can also do it with Linux.

Networkers do it with 3.5mm jacks.

Quanta members do it in workshops.

QL Today readers do it 6 times a year.

Quanta members do it monthly.

Aurora users do it in various modes.

QPC users do it by emulation.

SOQL users do it over the internet.

Sernet users do it serially.

QPAC2 users do it with mice.

QPAC2 users also do it with all sorts of Things.

Geoff Wicks does it in Style (Checker).

Geoff Wicks also does it with just words.

Bruce Nicholls does it over the mailing list.

PC users do it wearing putty (coloured cases).

USA QLers do it annually.

Q-Route users don't get lost doing it.

QL Genealogist users do it with families.

Euro QLers do it with a CHR$(181).

George Gwilt does it Turbo-charged.

Thierry Godefroy does it at sea.

Thierry also does it with an Archivers Control Panel.

Tony Firshman does it with Hermes.

The PROGS brothers do it with prowess.

Roy Wood does it with many buttons.

QLers do it with kudos (QDOS).

QLers do it by multitasking.

QLers do it by plugging in extra hardware.

Quanta officials do it by committee.

Bill Richardson does it with Z88s.

Darren Branagh does it in Ireland with Q-Celts.

QXL users do it in ISA slots.

Phoebus Dokos does it in a (Compact) Flash.

Norman Dunbar does it in assembler.

Dave Walker does it in C.

QLers do it with their own hardware.

MinisQL users do it with an aurora.

Qubide users do it with a hard disk (hope that got printed OK!)

Jim Hunkins does it with his QDT.

Jonathan Hudson does it with a QTPI.

... and how do you do it, Dilwyn?

Gee Graphics! (on the QL ?) - part 27

H L Schaaf

"More Connecting the dots".....

Dirichlet was said to have made Gauss understandable. Delaunay was said to have made Voronoi understandable.

I am, once again, going to tell you more than I know. I hope you understand. The Delaunay and Voronoi tessellations are duals of each other, that is to say if you've got one you should be able to figure out the other.

Last time we set up Post Office locations as points P in an array, and then connected them using Delaunay triangles.

This time we hope to figure out the Voronoi diagram showing the regions served by each Post Office, based on distance.

Load the code51_bas from last time, then merge in the listing 'D2V_bas'. After that add the PROcedures for angl_frm, dist_btwn, SWAP and CYC from listings such as the one that was in GG#24 about Circle Packing.

```
Listing of D2V_bas

100 REMark D2V_bas
110 REMark HL Schaaf Feb 24, 2002
120 REMark to go with GG#27 and merge into code51_bas from GG#26
140 REMark plus Voronoi diagram and a few menus
190 REMark set window parameters
260 choose_input
270    :
280 DEFine PROCedure Delaunay
290 REMark array P holds N Delaunay Points
300 REMark elements 1, 2 are the x, y values,
310 REMark element 3 is a calculated z-value
320 REMark array Dtri holds Delaunay triangles
330 REMark no more than (2*N)-5 are needed
340 DIM Dtri(((2*N)-5),3)
350 REMark elements 1, 2, 3 refer to Delaunay Point numbers
360 REMark Dedg holds the 3 Delaunay edges for each triangle
370 DIM Dedg(3*DIMN(Dtri),2)
380 REMark elements 1, 2  refer to Delaunay Point numbers
390 PRINT #0;' working on Delaunay triangulation of ';N;' points'
400 show_points : start = DATE
410 FOR i = 1 TO N-2
630      check_triangle i, j, k
640      show_triangle i,j,k
650      add_a_triangle i,j,k
660     END IF
670    END IF
680   END FOR k
690  END FOR j
700 END FOR i
710 show_points
720 END DEFine Delaunay
730    :
740 DEFine PROCedure show_triangle(a,b,c)
750 LOCal i
760  POINT P(a,1),P(a,2)
770  FOR i = b, c, a
780   LINE TO P(i,1),P(i,2)
790  END FOR i
800 END DEFine show_triangle
810 :
820 DEFine PROCedure check_triangle
830  DIM Tri_Pts(3,2)
840  degen = 0
850  Tri_Pts(1,1) = P(i,1)  :Tri_Pts(1,2) = P(i,2)
860  Tri_Pts(2,1) = P(j,1)  :Tri_Pts(2,2) = P(j,2)
870  Tri_Pts(3,1) = P(k,1)  :Tri_Pts(3,2) = P(k,2)
880  cr = circ3pts (Tri_Pts)
890 REMark look ahead and check distance to other points
```

```
900  FOR ct = k+1 TO N
910   IF (ct<>i AND ct<>j AND ct<>k) THEN
920    IF dist_btwn(cx,cy, P(ct,1),P(ct,2)) = cr THEN
930     degen = degen + 1
940     PRINT #0;'4 points co-circular '!! i !! j !! k !! ct
950     cn = ct
960    END IF
970   END IF
980  END FOR ct
990  IF (degen > 1) : PRINT #0;'more than 4 co-circular !' :PAUSE
1000  IF (degen) THEN
1010   PRINT #0;" point ";cn;" moved"
1020 REMark nudge fourth point out of circle
1030   cn_ang = angl_frm(cx, cy, P(cn,1), P(cn,2))
1060   P(cn,1)=P(cn,1) + nudge * COS(RAD(cn_ang))
1070   P(cn,2)=P(cn,2) + nudge * SIN(RAD(cn_ang))
1080   P(cn,3)=P(cn,1)^2 + P(cn,2)^2
1090  END IF
1100 END DEFine check_triangle
1110 :
1120 DEFine PROCedure add_a_triangle (i,j,k)
1130  Dtri(0,0) = Dtri(0,0) + 1
1140 REMark add 3 more edges
1150  Dedg(0,0) = Dedg(0,0) + 1
1160 REMark  1st point in triangle
1170  Dtri(Dtri(0,0),1) = i
1180 REMark 1st edge in triangle
1190  Dedg(Dedg(0,0),1) = i
1200  Dedg(Dedg(0,0),2) = j
1210  Dedg(0,0) = Dedg(0,0) + 1
1220 REMark 2nd point in triangle
1230  Dtri(Dtri(0,0),2) = j
1240 REMark 2nd edge in triangle
1250  Dedg(Dedg(0,0),1) = j
1260  Dedg(Dedg(0,0),2) = k
1270  Dedg(0,0) = Dedg(0,0) + 1
1280 REMark 3rd and final point of triangle
1290  Dtri(Dtri(0,0),3) = k
1300 REMark 3rd and final edge
1310  Dedg(Dedg(0,0),1) = k
1320  Dedg(Dedg(0,0),2) = i
1330 END DEFine add_a_triangle
1340 :
1350 DEFine PROCedure show_points
1360 LOCal i, i$
1370  FOR i = 1 TO N
1380   INK 0 : FILL 1 : CIRCLE P(i,1),P(i,2),ws/24
1390   FILL 0 : INK 7 : CIRCLE P(i,1),P(i,2),ws/24
1400   CURSOR P(i,1),P(i,2),-3*(1+(INT(LOG10(i)))),-4
1410   PRINT i
1420  END FOR i
1430 END DEFine show_points
1440 :
1450 DEFine PROCedure order_D_edges
1460 REMark order Delaunay edges and remove any duplicates
1470 REMark indicate shared interior edges vs. outer hull edges
1480  PRINT #0;\'please wait, putting edges in order'
1490 REMark order points in each edge
1500  FOR i = 1 TO Dedg(0,0)
1510 REMark order points
1520   IF Dedg(i,1)>Dedg(i,2) : SWAP Dedg(i,1),Dedg(i,2)
1530 REMark remove degenerate points as null edges
1540   IF Dedg(i,1) = Dedg(i,2) THEN
1550    PRINT #0;"edge ";i;" to be removed (null edge)"
1560    Dedg(i,0) = 0 : Dedg(i,1) = 0  : Dedg(i,2) = 0
1570   ELSE
1580 REMark mark valid as one edge
1590    Dedg(i,0) = 1
1600   END IF
1610  END FOR i
1620 ::
1630 REMark order all edges by 1st element
1640  REPeat bubl_sort_1
1650   swaps = 0
1660   FOR i = 2 TO Dedg(0,0)
1670    IF Dedg((i-1),1)>Dedg(i,1) THEN
1680     swaps = swaps + 1
1690     FOR j = 1 TO 2
1700      SWAP Dedg(i-1,j),Dedg(i,j)
```

REMarks in the listing should help explain what is being done. 'Degeneracies' can occur when points are spaced so that four adjacent ones would all be on the rim of the same circle. One way to deal with this is to fudge the data, and move one of the points off the circle. The variable 'nudge' in the listing may do the trick. If you see any edges of the Delaunay triangles crossing other edges, that's a sign of 'degeneracy' and needs to be analyzed. Other kinds of degeneracy include 3 points being colinear, or 2 points being identical.

I've tried to develop a PROCedure set_window to scale and center any reasonable set of points. This lets us use DATA sets and the PROCedure input_menu allows various other means of putting in points. With the PROCedure choose_options graphic choices menu you can clear the screen and combine the various Voronoi-Delaunay lines and points in different ways to see how they relate. Voronoi Regions will be shown in colors, and you can add the Points to see how they fit. Touching [S] in this graphic choice menu will save the screen into ram1_scr#, Enjoy !

There has been a good amount written about the Delaunay-Voronoi diagrams, and many more efficient, faster, etc. algorithms for doing them have been developed. Some algorithms allow insertion and removal of new points to existing sets. The concepts have also been extended to 3D and higher dimensions, and there are other ways of measuring distances, weighting the points, etc. so the topic is still being researched and developed with applications in

many diverse disciplines.

Next time we might go back and explore some of the subsets of 2D Delaunay triangulations such as the Convex Hull, the Gabriel graph, and the Minimal Spanning Tree.

I've just received a disk (February 15, 2002) and documentation from Stephen Poole with a much shorter program done by him in 1988 to demonstrate Voronoi diagrams. Thank you Steve! I'll have a look and hope to pass it along as well.

Still on my to-do list is pulling the Gee Graphics series together for posting on Dilwyn Jones website, where you can download the listings instead of having to type them in.

Biographical Footnotes: The personal relationship between Voronoi(or Voronoy?) and Delaunay (or Delone?).

These were interesting folks who lived in interesting times. Don't we all !

Voronoi is the French version of Voronoy (Voronoii?). Georgy (Georgii?) Fedoseevich V. (1868-1908), Ukranian, born and buried in Zhuravka.

Delaunay is the French version of Delone. According to John Conway, the family came to Russia from Ireland as mercenaries during the Napoleonic wars.

Boris Nikolaevich D.(1890-1980), Russian, born St. Petersburg. Enjoyed and excelled in mountain climbing. High energy, higher mathematics, higher dimensions, and higher peaks.

Dmitri K Faddeev(1906-1989), was a student of and co-author with Delaunay. The following excerpts are from his 100th anniversary dedication (1) to Delone:

```
1710     END FOR j
1720    END IF
1730   END FOR i
1740   IF NOT(swaps) : EXIT bubl_sort_1
1750  END REPeat bubl_sort_1
1760  PRINT #0;'1st sort completed',
1770 ::
1780 REMark now sort edges by 2nd element
1790  REPeat bubl_sort_2
1800   swaps = 0
1810   FOR i = 2 TO Dedg(0,0)
1820    IF (Dedg(i-1,1) = Dedg(i,1)) THEN
1830     IF Dedg(i-1,2) > Dedg(i,2) THEN
1840      swaps = swaps + 1
1850      SWAP Dedg(i-1,2),Dedg(i,2)
1860     END IF
1870    END IF
1880   END FOR i
1890   IF NOT(swaps) : EXIT bubl_sort_2
1900  END REPeat bubl_sort_2
1910  PRINT #0;'2nd sort completed',
1920 ::
1930 REMark eliminate nulls and duplicate edges
1940  nulls = 0
1950  FOR i = 1 TO Dedg(0,0)
1960   IF NOT(Dedg(i,1)) THEN
1970    nulls = nulls + 1
1980    FOR j = i TO Dedg(0,0)-1
1990     FOR jj = 0 TO 2
2000      Dedg(j,jj) = Dedg(j+1,jj)
2010     END FOR jj
2020    END FOR j
2030   END IF
2040  END FOR i
2050  Dedg(0,0) = Dedg(0,0) - nulls
2060  REPeat dupes_out
2070   dupes = 0
2080   FOR i = 1 TO Dedg(0,0)-1
2090    IF (Dedg((i+1),1)=Dedg(i,1)) AND (Dedg((i+1),2)=Dedg(i,2)) THEN
2100     dupes = dupes + 1
2110     Dedg((i),0)=Dedg((i),0) + Dedg(i+1,0)
2120     FOR j = i+1 TO Dedg(0,0)-1
2130      FOR jj = 0 TO 2
2140       Dedg(j,jj) = Dedg(j+1,jj)
2150      END FOR jj
2160     END FOR j
2170     Dedg(0,0) = Dedg(0,0) -1
2180     EXIT i
2190    END IF
2200   END FOR i
2210   IF NOT(dupes) : EXIT dupes_out
2220  END REPeat dupes_out
2230  PRINT #0;'duplicates removed'
2240  PRINT #0,'redimensioning arrays, associating triangles with edges'
2250  hull_edge = 0
2260  FOR i = 1 TO Dedg(0,0)
2270   IF Dedg(i,0) = 1 : hull_edge = hull_edge + 1
2280  END FOR i
2290 ::
2300 REMark now we can shorten the lists
2310 REMark first put Dtri into a Temp array
2320  DIM Temp(Dtri(0,0),DIMN(Dtri,2))
2330  FOR i = 0 TO DIMN(Temp)
2340   FOR j = 0 TO DIMN(Temp,2)
2350    Temp(i,j)=Dtri(i,j)
2360   END FOR j
2370  END FOR i
2380 ::
2390 REMark now redimension and refill Dtri
2400  DIM Dtri(DIMN(Temp),DIMN(Temp,2))
2410  FOR i = 0 TO DIMN(Temp)
2420   FOR j = 0 TO DIMN(Temp,2)
2430    Dtri(i,j)=Temp(i,j)
2440   END FOR j
2450  END FOR i
2460 ::
2470 REMark now do the same for the edges
2480  DIM Temp(Dedg(0,0),2)
2490  FOR i = 0 TO DIMN(Temp)
2500   FOR j = 0 TO DIMN(Temp,2)
```

```
2510    Temp(i,j) = Dedg(i,j)
2520   END FOR j
2530  END FOR i
2540 ::
2550 REMark now redimension Dedg to show which Dtri's apply
2560 REMark elements 3, 4 will refer to both of the following:
2570 REMark Delaunay triangles and corresponding Voronoi points
2580  DIM Dedg(DIMN(Temp),4)
2590  FOR i = 0 TO DIMN(Temp)
2600   FOR j = 0 TO DIMN(Temp,2)
2610    Dedg(i,j) = Temp(i,j)
2620   END FOR j
2630  END FOR i
2640  DIM Temp(0) : REMark now finished with Temp
2650 ::
2660 REMark now which Dtri apply to which edges ?
2670  FOR i = 1 TO DIMN(Dedg)
2680   loc_ate = 3
2690   FOR j = 1 TO DIMN(Dtri)
2700    found3 = 0
2710    FOR k = 1 TO 3
2720     IF Dedg(i,1) = Dtri(j,k) :found3  = found3 + 1
2730    END FOR k
2740    found4 = 0
2750    IF found3 THEN
2760     FOR k = 1 TO 3
2770      IF Dedg(i,2) = Dtri(j,k) :found4 = found4 + 1
2780     END FOR k
2790    END IF
2800    IF found4 THEN
2810     Dedg(i,loc_ate) = j : loc_ate = loc_ate + 1
2820    END IF
2840   END FOR j
2850  END FOR i
2860 END DEFine order_D_edges
2870 :
2880 DEFine PROCedure Voronoi
2890  INK#0,4
2900  IF NOT(Dtri(0,0)) : PRINT #0;'No Delaunay triangles found!':RETurn
2910  PRINT#0\"working out Voronoi points and edges"
2920 REMark array Medg holds Midpoint of Delaunay edges
2930 REMark elements 1, 2 = x, y coordinates at mid points of Dedg
2940  DIM Medg(Dedg(0,0),2)
2950 REMark  Voronoi points (Delaunay points + Boundary points)
2960  DIM Vpt((Dtri(0,0) + hull_edge),2)
2970 REMark  Voronoi edges with pointers to Vpts
2980  DIM Vedg(DIMN(Medg),2)
2990 REMark 3 or more Vedges meet at each Voroinoi point
3000 REMark work out Mid edge values
3010  FOR i = 1 TO DIMN(Medg)
3020   Medg(i,1)=(P(Dedg(i,1),1)+P(Dedg(i,2),1))/2
3030   Medg(i,2)=(P(Dedg(i,1),2)+P(Dedg(i,2),2))/2
3040  END FOR i
3050  INK 7
3060 ::
3070 REMark work out Voronoi points with circ3pts FuNction
3080  FOR i = 1 TO (DIMN(Vpt)-hull_edge)
3090   DIM Tri_Pts(3,2)
3100   FOR j = 1 TO 3
3110    FOR k = 1 TO 2
3120     Tri_Pts(j,k) = P(Dtri(i,j),k)
3130    END FOR k
3140   END FOR j
3150   Vpt(i,0) = circ3pts (Tri_Pts) : REMark radius
3160   Vpt(i,1) = cx                 : REMark center x
3170   Vpt(i,2) = cy                 : REMark center y
3180  END FOR i
3190 ::
3200 REMark for hull edges get boundary points
3210 REMark first find average "center" of hull
3220  midh_x = 0 : midh_y = 0 : hull_pts = 0
3230  FOR i = 1 TO DIMN(Medg)
3240   IF Dedg(i,0)=1 THEN
3250    hull_pts = hull_pts + 2
3260    midh_x = midh_x + P(Dedg(i,1),1) + P(Dedg(i,2),1)
3270    midh_y = midh_y + P(Dedg(i,1),2) + P(Dedg(i,2),2)
3280   END IF
3290  END FOR i
3300 ::
3310 REMark use dedg(0,1 TO) to hold
```

"Delaunay's father Nikolai Borisovich was a professor of mechanics, he and Voronoi the mathematician knew each other professionally. The younger Boris D. was present at many of their conversations, and was much influenced by Voronoi. At the age of 14 Boris was listening to lectures by Hilbert and Minkowski.

Boris was just entering Kiev University at the time of Voronoi's death.

The young Boris dedicated a paper to his father's friend and that's where his name became associated with these diagrams.

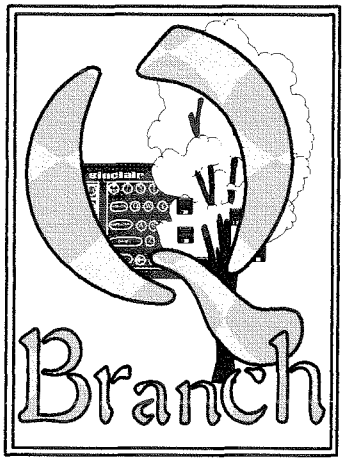
Boris D. was gifted in many other ways, doing landscapes in oils at age 7, playing and composing music, building and flying five gliders between the age of 17 and 19. Boris D. was a well-known mountaineer and hiker, climbed the highest peaks regularly, organized clubs, had a mountain peak named after him.

Boris was a most energetic man, doing handstands and lecturing well into his 70's. He had a knack for illustrating difficult abstract mathematical concepts with understandable geometry."

(1) Proceedings of the Steklov Institute of Mathematics Volume 196, Issue 4, 1992.

Editor's Note: As the listing is very long this time, we have reduced the size of the listing slightly. We will try to make the listing available on the QL Today/Dilwyn's Webseite very soon to save you from having to type it in.

Q Branch



Text 87

£ 79.00

Typset 94 £ 29.00
Fountext 94 £ 39.00
2488 drivers £ 29.00
Epson ESC/P2 drivers £ 26.00

Text 87 is the only QDOS / SMSQ wordprocessor capable of handliing the full screen on the Aurora / QXL / QPC systems. New drivers are currently being written.

PROGRAMMING

QD 98	£ 45.00
QD + QBasic	£ 59.00
QD + Qliberator + QBasic	£ 100.00
Qliberator	£ 50.00
Master Spy v 3.3	£ 30.00
QPTR	£ 30.00
Easyptr pt 1 & 2 (together)	£ 30.00
Easyptr pt 3 (C library)	£ 14.00
QMake	£ 15.00
QMon / JMon	£ 22.00
Basic Linker	£ 19.00
DISA 3	£ 31.00
QMenu	£ 14.00

SprinQtime

Q Branch have two Aurora Motherboards and a couple of Qbide Hard disk interfaces for sale at silly prices. Snap a pair of them up now and we will give you a free QPlane. We also hope to be able to announce a new Laser Printer driver for Text 87 at a show in the near future. Pop along to see us at one of the shows and we will give you details.

Aurora Boards Complete : £ 50.00

Qubide IDE intefaces : £ 45.00

BIG NEWS !!

Price reductions for SMSQ/E and QPC 2

See next page for details

'Just Words' by Geoff Wicks

THESAURUS, STYLE CHECK

£ 10.00 ea / ANY 2 PROGRAMS £ 18.00 / ALL 3 PROGRAMS £ 25.00
(Includes Pointer and non-pointer driven versions)
(P.E. versions need Hot_rext, WMAN and PTR_GEN or SMSQ/E to run)
Upgrades from previous versions £ 2.50 + S.A.E. New Manuals £ 1.50

QL2PC

Convert text files from QL to PC formats and much more !

Only £ 10.00 Now with HTML support !

QL Rhymes

Rhyming Dictionary £ 10.00

Spelling Crib : PD program £ 1.50 +SAE
or Free if you buy all three programs

New Program !

UTILITIES

FiFi 2	£ 18.00
QSup	£ 28.00
QSpread v 3	£ 48.00
Cueshell 2	£ 15.00
Qload / Qref	£ 15.00
Disk Mate 5	£ 16.50
QPAC 1	£ 20.00
QPAC 2	£ 40.00
QTYP 2	£ 30.00
QLQ	£ 28.00

We are currently out of stock of the SuperBasic Reference Manual Place your order now to get one as soon as it is reprinted

The SBASIC / SuperBASIC Reference Manual

The complete definitive guide to BASIC programming in QDOS / SMSQ including three disks of PD toolkits, example procedures and an electronic index.
compiled by Rich Mellor, Franz Hermann and Peter Jaeger

Over 500 pages !
£ 40.00
+ postage

News on the SuperBasic Reference Manual Coming soon !

Q Branch

Feeling out on a limb ?
Reach out for Q Branch.
Suppliers of Quality QDOS/SMSQ products
Hardware and Software.

Tel +44 (0) 1273-386030 fax +44 (0) 1273-430501
Mobile +44 (0) 7836-745501
email qbranch@qbranch.demon.co.uk web : http://www.qbranch.demon.co.uk

New Fax Number

Q Branch

20 LOCKS HILL, PORTSLADE,
E. SUSSEX. BN41 2LB. UK.

ProWesS

ProWesS (now free !)	£ 1.60
DATAdesign	£ 20.00
Fontutils	£ 28.00
File Search	£ 11.00
PFlist	£ 11.00
Dilwyn's Fontpack	£ Call
LINEdesign v 2.16	£ 22.00
PWfile	£ 17.50

Paragraph

The ProWesS word processor

¶ Demo version £ 1.50 + postage
Full Registered version £ 18.00

Version 2.03 available now !

Hardware

We have a small stock of second user items. Auroras / Qubides / Gold Cards / Qplanes / superHermes etc. call us to get details of the items available. These are going fast so call soon.

QXL II	**£ 100.00**
Recycled superHermes	£ 65.00 *
Recycled Gold Card	£ 50.00 *
Recycled Aurora	See over*
Qubide	See over
Qplane	£ 25.00
Aurora cables	£ 3.00
Aurora rom adaptor	£ 3.00
'Arfa Braquet'	£ 8.00
'Son of Braquet'	£ 18.00
The 'Braquet'	£ 16.00
MC plate	£ 6.50

* when available.

Qubide upgrades to version 2.01 £ 8.00

SMSQ/E

Gold Card / Atari / QXL Version

Now Only £ 32.00

Various Atari versions : call for details

QPC 2 v3 full colour version!

Now Only £ 65.00

Upgrades from QPC 1 £ 46.00 (return master disk)
Upgrades from QPC 2 v1 £ 30.00
Upgrades from QPC 2 v2 £ 14.00
If Bought/upgraded after 15/10/01 £ 5.00

Special offer !
Get Cueshell for only £15.00 with any copy of SMSQ/E or QPC 2 upgrade !

Q Branch Programs

The Knight Safe 3	£ 35.00
upgrades from previous versions	£ 5.00
Q - Count Pointer driven home accounting	£ 25.00
Q - Route v1.08C Route finding programme	£ 25.00
The Fractal Collection	£ 35.00

Post and Packing is included with Software Prices

VISA

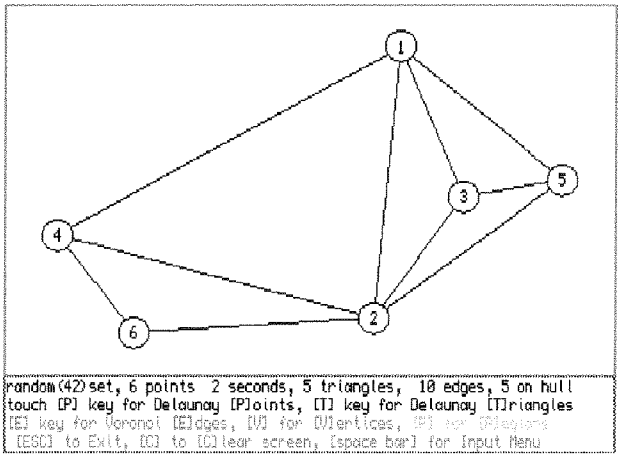
We can accept payment by Visa, Mastercard and Switch. We also accept cheques drawn on a UK Bank in Sterling.
You can also pay directly into our bank in Euros.
Barclays Bank Acc# 79016888 sort code :20-71-02 Name :QBranch)

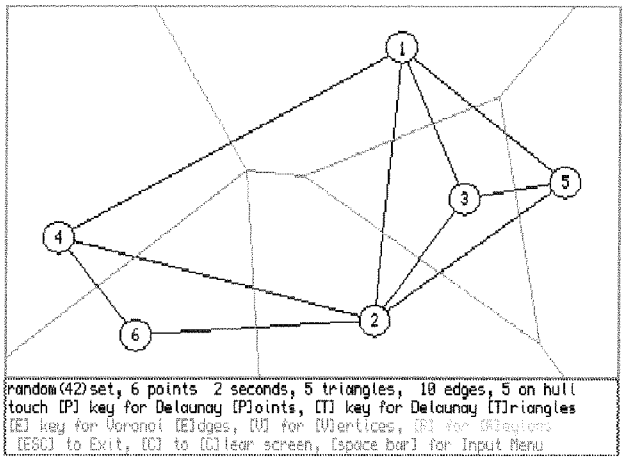
MasterCard

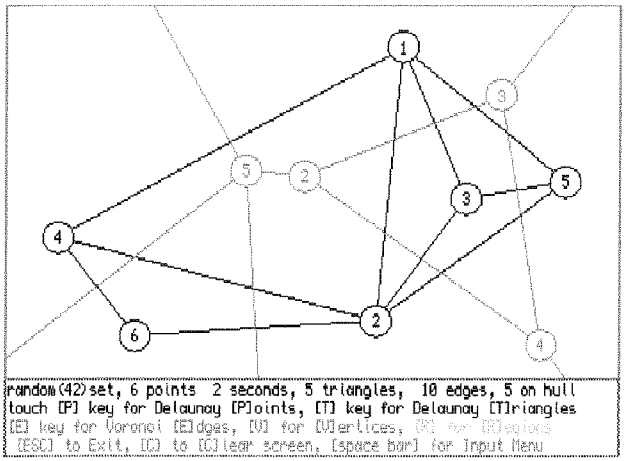
```
3320 REMark "average" center of the hull points
3330  Dedg(0,1)=midh_x/hull_pts : Dedg(0,2)=midh_y/
      hull_pts
3340  INK 4
3350 REMark find intersection with appropriate edge
3360 REMark and associate with appropriate Dtri and Vpt
3370 REMark to build Vedg
3380  v_n = 0
3390  v_pn = DIMN(Dtri)
3400  FOR i = 1 TO DIMN(Medg)
3410   IF Dedg(i,0)=2 THEN
3420 REMark interior edges have 2 adjacent triangles
3430    v_n = v_n + 1
3440 REMark build vedg
3450    Vedg(v_n,1)=Dedg(i,3)
3460    Vedg(v_n,2)=Dedg(i,4)
3470 REMark shared edge, 2 adjacent Dtri and 2 Vpts
3480   END IF
3490 :::
3500   IF Dedg(i,0)=1 THEN
3510 REMark hull edges have only 1 adjacent triangle
3520    v_n = v_n + 1    : v_pn = v_pn + 1
3530 REMark is direction from 1 to 2 CW or CCW ?
3540    x_1 = Dedg(0,1) : y_1 = Dedg(0,2)
3550    x_2 = P(Dedg(i,1),1) : y_2 = P(Dedg(i,1),2)
3560    ang_1 = angl_frm (x_1, y_1, x_2, y_2)
3570    x_2 =  P(Dedg(i,2),1) : y_2 = P(Dedg(i,2),2)
3580    ang_2 = angl_frm (x_1, y_1, x_2, y_2)
3590    inc_ang = ang_2 - ang_1
3600    IF inc_ang < 0 :inc_ang = 360 + inc_ang
3610    IF inc_ang < 180 : flip = -90: REMark direction
        is ccw
3620    IF inc_ang > 180 : flip = 90 : REMark direction
        is cw
3630 REMark hull edge direction = Hull_edgd_ang
3635    hep1x = P(Dedg(i,1),1) : hep1y = P(Dedg(i,1),2)
3636    hep2x = P(Dedg(i,2),1) : hep2y = P(Dedg(i,2),2)
3640    Hull_edgd_ang = angl_frm(hep1x, hep1y, hep2x,
        hep2y)
3650 REMark Normal perpendicular away from convex hull is
     norm_ang
3660    norm_ang = (Hull_edgd_ang + flip)
3670    IF norm_ang > 360 : norm_ang = norm_ang - 360
3680    IF norm_ang < 0 : norm_ang = norm_ang + 360
3690 REMark find directions to far away corners of
     bounding box
3700    FOR bL = 1 TO 4
3710 box_L(bL,0)=angl_frm(Medg(i,1),Medg(i,2),
box_L(bL,1),box_L(bL,2))
3720    END FOR bL
3730 REMark compare with norm_ang to find proper Boundary
     edge
3740    FOR bL = 1 TO 4
3760     IF (norm_ang >= box_L((CYC(bL,4)),0)) THEN
3770      IF (norm_ang < box_L((CYC(bL+1,4)),0)) THEN
3780       box_edge = bL
3790      END IF
3800     END IF
3810    END FOR bL
3820 REMark special case for right side 360 to 0 degrees
     transition
3830 IF (norm_ang >= box_L(4,0)) OR (norm_ang <=
     box_L(1,0)):box_edge = 4
3840 ::
3850   SELect ON box_edge
3860  = 1
3870    dy = box_L(1,2)-Medg(i,2)
3880    dx = dy*TAN(RAD(90-norm_ang))
3890    Vpt(v_pn,1) = Medg(i,1)+dx
3900    Vpt(v_pn,2) = box_L(1,2)
3910  = 2
3920    dx = -(box_L(2,1)-Medg(i,1))
3930    dy = dx*TAN(RAD(180-norm_ang))
3940    Vpt(v_pn,2) = Medg(i,2)+dy
3950    Vpt(v_pn,1) = box_L(2,1)
3960  = 3
3970    dy = -(box_L(3,2) - Medg(i,2))
3980    dx = dy*TAN(RAD(norm_ang-270))
3990    Vpt(v_pn,1) = Medg(i,1)+dx
4000    Vpt(v_pn,2) = box_L(3,2)
4010  = 4
4020    dx = box_L(4,1) - Medg(i,1)
4030    dy = dx*TAN(RAD(norm_ang))
4040    Vpt(v_pn,2) = Medg(i,2)+dy
4050    Vpt(v_pn,1) = box_L(1,1)
4060  = REMAINDER : PRINT #0\"(in Voronoi) which boundary
      ?" : STOP
4070   END SELect
4080 ::
4090    Vedg(v_n,0) = i
4100    Dedg(i,4) = v_pn
4110    Vedg(v_n,1) = Dedg(i,3)
4120    Vedg(v_n,2) = v_pn
4130   END IF
4140  END FOR i
4150  INK 7
4160  elapsed_time = DATE - start
4170 END DEFine Voronoi
4180 :
4190 DEFine FuNction circ3pts (Tri_Pts)
4200 LOCal i
4210 REMark Radius and Center of Circumscribing Circle
4220 REMark of triangle described by three points
4230 REMark adapted from Graphic Gems I, page 20 Ronald
     Goldman
4240 REMark uses 3 points, each of which has x and y
     coordinates
4250 REMark DIM Tri_Pts(3,2) and fill BEFORE calling this
     FuNction
4260 REMark Tri_pts is array of three points with x,y
     values
4270 REMark where p(1,1)= x1, p(1,2)=y1, etc
4280  DIM tri_d(3) : REMark uses scalars tri_d(1 to 3)
4290  DIM tri_c(3) : REMark and c values tri_c(1 to 3)
4300 REMark uses vector values and vector differences
4310  DIM Vec_val(2,2) : REMark calls for Dot_Product,
      Vec_Diff
4320 ::
4330 REMark get 3 tri_d values
4340  FOR i = 1 TO 3
4350   Vec_val(1,1)= Vec_diff(Tri_Pts(CYC(i-1,3)),
       Tri_Pts(i))
4360   Vec_val(1,2)= vecydif
4370   Vec_val(2,1)= Vec_diff(Tri_Pts(CYC(i+1,3)),
       Tri_Pts(i))
4380   Vec_val(2,2)= vecydif
4390   tri_d(i)=Dot_Prod(Vec_val)
4400  END FOR i
4410 ::
4420 REMark now the 3 tri_c values
4430  FOR i = 1 TO 3
4440   tri_c(i) = tri_d(CYC(i+1,3)) * tri_d(CYC(i+2,3))
4450  END FOR i
4460 ::
4470  FOR i = 1 TO 3
4480   tri_c(0) = tri_c(0)+tri_c(i)
4490  END FOR i
4500  IF NOT(tri_c(0)) THEN
4510   PRINT #0\"(circ3pts) colinear or duplicate points
       ?" :PAUSE
4520  END IF
4530 ::
4540 REMark now the radius
4550  Tri_Rad = 1
4560  FOR i = 1 TO 3
4570   Tri_Rad = Tri_Rad *(tri_d(i)+tri_d(CYC(i+1,3)))
4580  END FOR i
4590  IF tri_c(0) THEN
4600   Tri_Rad = (SQRT(Tri_Rad/tri_c(0)))/2
4610  ELSE
4620   Tri_Rad = 0
4630  END IF
4640 ::
4650  DIM tri_Ctr(2)
4660 REMark now the center x and y
4670  IF Tri_Rad THEN
4680   tri_Ctr(0) =  Tri_Rad
4690   FOR i = 1 TO 3
4700    tri_Ctr(0)=(tri_c(CYC(i+1,3))+tri_c(CYC(i-1,3)))
```

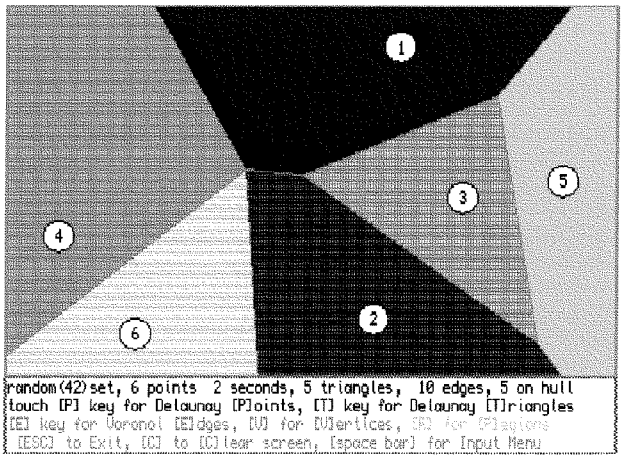
```
4710    tri_Ctr(1) = tri_Ctr(1) + tri_Ctr(0)*Tri_Pts(i,1)
4720    tri_Ctr(2) = tri_Ctr(2) + tri_Ctr(0)*Tri_Pts(i,2)
4730   END FOR i
4740   tri_Ctr(0) =  Tri_Rad
4750   tri_Ctr(1) = tri_Ctr(1)/(2*tri_c(0))
4760   tri_Ctr(2) = tri_Ctr(2)/(2*tri_c(0))
4770  END IF
4780  cr = tri_Ctr(0) : REMark radius of circle
4790  cx = tri_Ctr(1) : REMark x-coordinate of center
4800  cy = tri_Ctr(2) : REMark y_coordinate of center
4810  RETurn cr
4820  RETurn cx
4830  RETurn cy
4840 END DEFine  : REMark FuNction circ3pts (Tri_pts)
4850 :
4860 DEFine FuNction Vec_diff(point1,point2)
4870  vecxdif = point1(1) - point2(1)
4880  vecydif = point1(2) - point2(2)
4890  RETurn vecxdif
4900  RETurn vecydif
4910 END DEFine :REMark FuNction Vec_diff
4920 :
4930 DEFine FuNction Dot_Prod(vectors)
4940  RETurn vectors(1,1)*vectors(2,1) + vectors(1,2)*
     vectors(2,2)
4950 END DEFine : REMark FuNction Dot_Prod
4970 :
4980 DEFine PROCedure show_regions
4990  FOR region = 1 TO DIMN(P)
5000 REMark collect relevant triangles and hull edges
5010   p$ = '' : p_count = 0
5020   FOR tri = 1 TO DIMN(Dtri)
5030    FOR pt = 1 TO 3
5040     IF region = Dtri(tri,pt) THEN
5050 REMark add to list
5060      IF NOT(tri INSTR p$) THEN
5070       p_count = p_count + 1
5080       p$ = p$ & tri & '#'
5090      END IF
5100     END IF
5110    END FOR pt
5120   END FOR tri
5130   FOR Hull_edg = 1 TO DIMN(Dedg)
5140 REMark find a hull edge with the point on it
5150    IF (Dedg(Hull_edg,0)=1) THEN
5160     IF ((Dedg(Hull_edg,1)=region) OR
         (Dedg(Hull_edg,2)=region)) THEN
5170 REMark that's an indicator of a wanted hull edge
5180 REMark that would have generated a boundary point
5190 REMark check that we haven't used it before
5200      IF NOT(Dedg(Hull_edg,4) INSTR p$) THEN
5210       p_count = p_count +1
5220       p$ = p$ & Dedg(Hull_edg,4) & '#'
5230 REMark added the boundary point to the list
5240      END IF
5250     END IF
5260    END IF
5270   END FOR Hull_edg
5280   DIM Region_Pts(p_count,1)
5290   array_index = 0
5300   REPeat stuff_array
5310    array_index = array_index +1
5320    IF array_index > p_count :  EXIT stuff_array
5330    string_index = '#' INSTR p$
5340    IF NOT(string_index) : EXIT stuff_array
5350    Region_Pts(array_index,0) = p$(1 TO (string_index
        - 1))
5360    x_1 = P(region,1) : y_1 = P(region,2)
5370    x_2 =  Vpt(Region_Pts(array_index,0),1)
5380    y_2 =  Vpt(Region_Pts(array_index,0),2)
5390    Region_Pts(array_index,1)=angl_frm (x_1, y_1,
        x_2, y_2)
5400    IF (string_index +1)<LEN(p$) : p$ = p$(
        (string_index + 1) TO )
5410   END REPeat stuff_array
5420   REPeat bubl_sort_0
5430    swaps =  0
5440    FOR bub = 2 TO p_count
5450     IF Region_Pts(bub,1)<Region_Pts((bub-1),1) THEN
5460      swaps = swaps + 1
5470       SWAP Region_Pts(bub,0),Region_Pts((bub-1),0)
5480       SWAP Region_Pts(bub,1),Region_Pts((bub-1),1)
5490     END IF
5500    END FOR bub
5510    IF NOT(swaps) :EXIT bubl_sort_0
5520   END REPeat bubl_sort_0
5530 :
5540   INK (( region * 15 ) MOD 256 ) : FILL 1
5560   POINT Vpt(Region_Pts(p_count,0),1), Vpt(Region_Pts
       (p_count,0),2)
5570   FOR side = 1 TO p_count
5580    LINE TO Vpt(Region_Pts(side,0),1), Vpt(Region_Pts
        (side,0),2)
5590   END FOR side
5600   FILL 0 : INK 7
5610  END FOR region
5630 END DEFine show_regions
5640 :
5650 DEFine PROCedure show_triangles
5660  INK 7
5670  FOR i = 1 TO DIMN(Dtri)
5680   POINT P(Dtri(i,3),1),P(Dtri(i,3),2)
5690   FOR j = 1 TO 3
5700    LINE TO P(Dtri(i,j),1),P(Dtri(i,j),2)
5710   END FOR j
5720  END FOR i
5730 END DEFine show_triangles
5740 :
5750 DEFine PROCedure choose_options
5760  CLS# 0 : INK #0;7
5770  PRINT #0;data_source$!!elapsed_time ! 'seconds,' !!
5780  PRINT #0;Dtri(0,0) ! 'triangles,' !! Dedg(0,0) !
      'edges,' !!
5790  PRINT #0;hull_edge ! 'on hull'
5800  PRINT #0;"touch [P] key for Delaunay [P]oints, ";
5810  PRINT #0;"[T] key for Delaunay [T]riangles" :INK
      #0, 4
5820  PRINT #0;"[E] key for Voronoi [E]dges, [V] for
      [V]ertices, ";
5830  INK #0, 2 : PRINT #0 ;"[R] for [R]egions" :INK #0,4
5840  PRINT #0;" [ESC] to Exit, [C] to [C]lear screen,";
5850  PRINT #0;" [space bar] for Input Menu"
5860  REPeat query
5870   ans$ = INKEY$(-1)
5880   IF ans$ = CHR$(248) : PAUSE
5890   IF ans$ = CHR$(27) OR ans$ = CHR$(32) : EXIT query
5900   IF ans$ == 'c' :CLS
5910   IF ans$ == 'r' THEN
5920    show_regions : show_vedges
5930   END IF
5940   IF ans$ == 'p' THEN show_points
5950   IF ans$ == 't' THEN show_triangles
5960   IF ans$ == 'e' THEN show_vedges
5970   IF ans$ == 'v' THEN show_Vpoints
5980 REMark added 'undocumented' provision for saving
     screens
5990 IF ans$ == 's' THEN SBYTES_0 'ram1_scr'&sn,2^17,2^15
     : sn = sn + 1
6000  END REPeat query
6010  IF ans$ = CHR$(27) : CLS : CLS # 0 : STOP
6020  choose_input
6030 END DEFine choose_options
6040 :
6050 DEFine PROCedure show_vedges
6060  INK 4
6070  FOR i = 1 TO DIMN(Vedg)
6080   POINT Vpt(Vedg(i,1),1), Vpt(Vedg(i,1),2)
6090   LINE TO Vpt(Vedg(i,2),1), Vpt(Vedg(i,2),2)
6100  END FOR i
6120 END DEFine show_vedges
6130 :
6140 DEFine PROCedure show_Vpoints
6150  FOR i = 1 TO DIMN(Vpt)
6160   INK 0 :FILL 1
6170   CIRCLE Vpt(i,1),Vpt(i,2),ws/24
6180   FILL 0 :INK 4
6190   CIRCLE Vpt(i,1),Vpt(i,2),ws/24
6200   CURSOR Vpt(i,1),Vpt(i,2),-3*(1+(INT(LOG10(i)))),-4
6210   PRINT i
6220  END FOR i
```

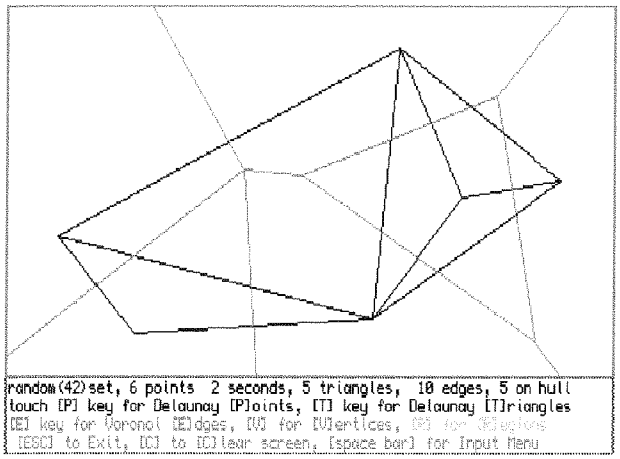
```
6230 END DEFine show_Vpoints
6240 :
6250 DEFine PROCedure choose_input:
6260 REMark gives choice of READ'ing in DATA
6270 REMark or creating Random set of points
6280 REMark or allowing user Keyboard input
6290 REMark or nearly regular Grid patterns
6300  WINDOW ww,wh,wx,wy : BORDER bw ,4
6310  PAPER #0, 7 : INK #0, 0 : sn = 0 : REMark sn =
      screen save number
6320  REPeat get_input_source
6330   CLS#0
6340   PRINT #0;'Please Choose Source for Data'
6350 PRINT #0;'[D]ATA sets, [R]andom points, [K]eyboard
     inputs, [G]rids'
6360   PRINT #0\\'  [ESC]  to exit'
6370   inp$ = INKEY$(-1)
6380   IF inp$=CHR$(27): PAPER #0,0 : INK #0,4 : CLS #0 :
STOP
6390   IF inp$ == 'd' OR inp$ == 'r' : EXIT
       get_input_source
6400   IF inp$ == 'k' OR inp$ == 'g' : EXIT
       get_input_source
6410  END REPeat get_input_source
6420  PAPER#0,0 : INK#0,2 : CLS#0
6430  IF inp$ == 'd' : data_menu
6440  IF inp$ == 'r' : rando_menu
6450  IF inp$ == 'k' : keybd_menu
6460  IF inp$ == 'g' : grids_menu
6470  get_limits : set_window
6480  Delaunay : order_D_edges
6490  Voronoi : choose_options
6500 END DEFine choose_input
6510 :
6520 DEFine PROCedure get_limits
6530 REMark find limits of x and y, preprocess z
6540  min_x = 1E6 : max_x = -1E6 : min_y = min_x : max_y
      = max_x
6550  FOR i = 1 TO N
6560   IF P(i,1)›max_x : max_x = P(i,1)
6570   IF P(i,1)‹min_x : min_x = P(i,1)
6580   IF P(i,2)›max_y : max_y = P(i,2)
6590   IF P(i,2)‹min_y : min_y = P(i,2)
6600   P(i,3)= P(i,1)^2 + P(i,2)^2
6610  END FOR i
6620 END DEFine get_limits
6630 :
6640 DEFine PROCedure set_window
6650 REMark work out image parameters
6660 REMark use 10% for margins (total of 20%)
6670  h_range = max_x - min_x
6680  mid_x = (max_x + min_x)/2
6690  v_range = max_y - min_y
6700  mid_y = (max_y + min_y)/2
6710  window_aspect = (graspix*(ww-4*bw))/(wh-2*bw)
6720  image_aspect = h_range/v_range : REMark
      width/height
6730 REMark what is relation between window and image ?
6740  window2image = window_aspect/image_aspect
6750  IF window2image ›= 1 THEN
6760 REMark it should fit across ok, but height governs
6770   ws = v_range*1.2   : REMark adding 20%
6780   gw = (ww-4*bw)/(wh-2*bw) * graspix * (ws)
6790   x_off = min_x - (gw - h_range)/2
6800   y_off = min_y - (.1*v_range)
6810  ELSE
6820 REMark it will fit up & down ok, but width governs
6830   ws = (h_range*1.2)/window_aspect:REMark adding 20%
6840   gw = (ww-4*bw)/(wh-2*bw) * graspix * (ws+1)
6850   y_off = min_y - (ws - v_range)/2
6860   x_off = min_x - (.1*h_range)
6870  END IF
6880 REMark use offsets to center image on screen
6890  SCALE ws, x_off, y_off : PAPER 0:INK 7: CLS
6900  nudge = ws * 1E-5
6910 REMark set up distant way-off-screen bounding box
6920  DIM box_L(4,2)  : REMark 4 box corners
6930  margin = -ws*16
6940  box_L(1,1) = +(gw-margin)/2 : box_L(1,2) =
      +(ws-margin)/2
6950  box_L(2,1) = -(gw-margin)/2 : box_L(2,2) =
      +(ws-margin)/2
6960  box_L(3,1) = -(gw-margin)/2 : box_L(3,2) =
      -(ws-margin)/2
6970  box_L(4,1) = +(gw-margin)/2 : box_L(4,2) =
      -(ws-margin)/2
6980 END DEFine set_window
6990 :
7000 DEFine PROCedure data_menu
7010  PRINT #0;"DATA sets from the following are in the
      listing:"
7020  PRINT #0;"touch [boxed]  key"
7030  PRINT #0;'  [C]atmog45C,  [G]reen-Sibson, ';
7040  PRINT #0;'[B]owyer, [P]reparata'
7050  PRINT #0;"  [O]'Rourke,   [K]lette, O'[R]ourke"
7060  PRINT #0\\"[ESC] to Exit, [space bar] for
      input_menu"
7070  REPeat get_set
7080   set$ = INKEY$(-1)
7090   IF set$=='c' OR set$ == 'g' :EXIT get_set
7100   IF set$=='b' OR set$ == 'p' :EXIT get_set
7110   IF set$=='o' OR set$ == 'k' :EXIT get_set
7120   IF set$=='r'  : EXIT get_set
7130   IF set$ = CHR$(27) OR set$ = CHR$(32):EXIT get_set
7140  END  REPeat get_set
7150  IF set$ == 'c'  : RESTORE 8530 : read_into_P_array
7160  IF set$ == 'g'  : RESTORE 8640 : read_into_P_array
7170  IF set$ == 'b'  : RESTORE 8720 : read_into_P_array
7180  IF set$ == 'p'  : RESTORE 8800 : read_into_P_array
7190  IF set$ == 'o'  : RESTORE 8890 : read_into_P_array
7200  IF set$ == 'k'  : RESTORE 8970 : read_into_P_array
7210  IF set$ == 'r'  : RESTORE 9060 : read_into_P_array
7220  IF set$ = CHR$(27) : CLS : CLS#0 : STOP
7230  IF set$ = CHR$(32) : choose_input
7240 END DEFine data_menu
7250 :
7260 DEFine PROCedure rando_menu
7270  PRINT "Default SEED is 42"
7280  INPUT 'you may now ENTER a SEED if you wish —›';
      seed$
7290  IF seed$ = '' : seed$ = '42'
7300  seed = seed$
7310  RANDOMISE seed
7320  REPeat num_pts
7330   N = 0
7340   INPUT "How many points?  ENTER 3 or more —›";num$
7350   IF num$ ‹› '' : N = num$
7360   IF N › 2 : EXIT num_pts
7370  END REPeat num_pts
7380  data_source$ = 'random('&seed$&')set, '&N&' points'
7390  DIM P(N,3)
7400  PRINT \," Default X and Y limits are : "
7410  PRINT ,,"X from 0 to ";INT((ww-4*bw)*graspix);"
      across"
7420  PRINT ,,"Y from 0 to ";INT(wh-2*bw);" high"
7430  PRINT \,"  [ENTER] for these default limits or "
7440  PRINT ,"    touch 'S' to [S]et them yourself "
7450  REPeat limit_input
7460   lim$ = INKEY$(-1)
7470   IF (lim$ == 's') OR (lim$ = CHR$(10)) : EXIT
      limit_input
7480  END REPeat limit_input
7490  mnxv = 0 : mxxv = INT((ww-4*bw)*graspix)
7500  mnyv = 0 : mxyv = INT(wh-2*bw)
7510  xv_range = mxxv - mnxv
7520  yv_range = mxyv - mnyv
7530 :
7540  IF lim$=='s' THEN
7550   INPUT "maximum x-value ? (default is "&mxxv&")";
       mxxv$
7560   IF mxxv$ = '' : mxxv$ = mxxv
7570   mxxv = mxxv$
7580   INPUT "minimum x-value ? (default is 0) ";mnxv$
7590   IF mnxv$ = '' : mnxv$ = '0'
7600   mnxv = mnxv$
7610   xv_range = mxxv - mnxv
7620   INPUT "maximum y-value ? (default is
"&mxyv&")";mxyv$
7630   IF mxyv$ = '' : mxyv$ = mxyv
7640   mxyv = mxyv$
```


1
2
3
4
5
6
random(42)set, 6 points 2 seconds, 5 triangles, 10 edges, 5 on hull
touch [P] key for Delaunay [P]oints, [T] key for Delaunay [T]riangles
[E] key for Voronoi [E]dges, [V] for [V]ertices, [R] for [R]egions
[ESC] to Exit, [C] to [C]lear screen, [space bar] for Input Menu


1
2
3
4
5
6
random(42)set, 6 points 2 seconds, 5 triangles, 10 edges, 5 on hull
touch [P] key for Delaunay [P]oints, [T] key for Delaunay [T]riangles
[E] key for Voronoi [E]dges, [V] for [V]ertices, [R] for [R]egions
[ESC] to Exit, [C] to [C]lear screen, [space bar] for Input Menu


1
2
3
4
5
6
random(42)set, 6 points 2 seconds, 5 triangles, 10 edges, 5 on hull
touch [P] key for Delaunay [P]oints, [T] key for Delaunay [T]riangles
[E] key for Voronoi [E]dges, [V] for [V]ertices, [R] for [R]egions
[ESC] to Exit, [C] to [C]lear screen, [space bar] for Input Menu


1
2
3
4
5
6
random(42)set, 6 points 2 seconds, 5 triangles, 10 edges, 5 on hull
touch [P] key for Delaunay [P]oints, [T] key for Delaunay [T]riangles
[E] key for Voronoi [E]dges, [V] for [V]ertices, [R] for [R]egions
[ESC] to Exit, [C] to [C]lear screen, [space bar] for Input Menu


random(42)set, 6 points 2 seconds, 5 triangles, 10 edges, 5 on hull
touch [P] key for Delaunay [P]oints, [T] key for Delaunay [T]riangles
[E] key for Voronoi [E]dges, [V] for [V]ertices, [R] for [R]egions
[ESC] to Exit, [C] to [C]lear screen, [space bar] for Input Menu

```
7650   INPUT "minimum y-value ? (default is 0) ";mnyv$
7660   IF mnyv$ = '' : mnyv$ = '0'
7670   mnyv = mnyv$
7680   yv_range = mxyv - mnyv
7690  END IF
7700  FOR i = 1 TO N
7710   P(i,1) = mnxv + RND * (xv_range)
7720   P(i,2) = mnyv + RND * (yv_range)
7730  END FOR i
7740 END DEFine rando_menu
7750 :
7760 DEFine PROCedure keybd_menu
7770  INPUT 'how many points ? ';N
7780  data_source$ = 'keyboard input of '&N&' points'
7790  DIM P(N,3)
7800  FOR i = 1 TO N
7810   INPUT 'x value for point '&i&' ? ';P(i,1)
7820   INPUT 'y value for point '&i&' ? ';P(i,2)
7830  END FOR i
7840 END DEFine keybd_menu
7850 :
7860 DEFine  PROCedure grids_menu
7870  PRINT #0;" [T]riangles  or [S]quares ? "
7880  REPeat get_pattern
7890   pat$ = INKEY$(-1)
7900   IF pat$=='t' OR pat$ == 's' : EXIT get_pattern
7910  END REPeat get_pattern
7920  IF pat$=='t' : shape$=' triangles ':ff= (SQRT(3))/2
7930  IF pat$=='s' : shape$=' squares '  :ff = 1
7940 REMark default graphic pixel area of window
7950  window_area =  ((wh-2*bw) *(ww-4*bw)* graspix)
7960  INPUT#0; "about how many"&shape$&"? ",num_of_shps
7970 REMark area of a single shape
7980  shape_area =  window_area / num_of_shps
7990  IF pat$ == 's' : base_len = SQRT( shape_area / ff)
8000  IF pat$ == 't' : base_len = SQRT(( shape_area *
      2)/ff)
8010  s_across = 1+INT(((ww-4*bw)*graspix)/base_len)
8020  s_stacks = 2+INT((wh-2*bw)/(base_len * ff))
8030  IF pat$ == 's' : PRINT#0; (s_across-1)*
      (s_stacks-1); shape$
8040  IF pat$ == 't' : PRINT#0; 2*(s_across-1)*
      (s_stacks-1);shape$
8050  N = s_across * s_stacks
8060  PRINT#0;N;' points'
8070  data_source$ = 'grid of '&num_of_shps&shape$
8090  DIM P(N,3)
8100  p_n = 0
8110 REMark a nudge to head off 'degeneracies'
8120  nudge =  (wh - (2 * bw)) * 1E-5
8130  FOR i = 0 TO s_across-1
8140   FOR j = 0 TO s_stacks-1
8150    p_n = p_n + 1
8160    P(p_n,1) = i * base_len
8170 REMark leave edges of convex hull as convex !
8180    IF (pat$ == 's') THEN
8190     IF (i <> 0) AND (i <> s_across -1) THEN
8200      P(p_n,1) = P(p_n,1) + ((1 + RND) * nudge)
8210     END IF
8220    END IF
8230    IF pat$ =='t' THEN
8240     P(p_n,1)=P(p_n,1)+ .5*(j MOD 2)*base_len
8250    END IF
8260    P(p_n,2) = j * base_len * ff
8270   END FOR j
8280  END FOR i
8290 END DEFine grids_menu
8300 :
8310 DEFine PROCedure read_into_P_array
8320 REMark P is array of N Delaunay Points
8330 REMark elements 1, 2 are the x, y values,
8340 REMark element 3 is a calculated z-value
8350  CLS#0 : READ N : DIM P(N,3)
8380  FOR i = 1 TO N
8390   READ P(i,1)
8400  END FOR i
8410  FOR i = 1 TO N
8420   READ P(i,2)
8430  END FOR i
8440  READ data_source$
8450  data_source$ = data_source$&'('&N&')'
8460 END DEFine read_into_P_array
8470 :
8480 REMark sets of DATA from references shown
8490 REMark Number of points first
8500 REMark then x-values for points
8510 REMark then y-values for points
8520 REMark then any string$ for data_source$
8530 :
8540 REMark Catmog45C figure 2 data
8550 REMark ref: "Voronoi (Thiessen) Polygons"
8560 REMark by B.N. Boots 1986
8570 REMark Institute of British Geographers
8580 REMark Geo Books, Norwich, UK
8590 DATA 10
8600 DATA 38, 45, 70, 58, 92, 87, 115, 117, 113, 80
8610 DATA 82, 61, 71, 52, 40, 66, 88, 55, 50, 89
8620 DATA "Catmog45C"
8630 REMark end of DATA from Catmog45C
8640 :
8650 REMark Green-Sibson Figure 1 data
8660 REMark ref: Computer Journal V 21 N 2 1978
8670 DATA 12
8680 DATA 35, 81, 90, 62, 50, 50, 54, 82, 60, 51, 35, 61
8690 DATA 89, 89, 81, 78, 74, 60, 58, 50, 43, 36, 34, 19
8700 DATA "Green-Sibson"
8710 REMark end of DATA for Green-Sibson
8720 :
8730 REMark Bowyer Figure 3 data
8740 REMark ref: Computer Journal V 24 N2 1981
8750 DATA 8
8760 DATA 73, 22, 29, 49, 30, 75, 19, 87
8770 DATA 70, 52, 64, 51, 33, 20, 62, 52
8780 DATA "Bowyer"
8790 REMark end of DATA for Bowyer
8800 :
8810 REMark Preparata & Shamos data
8820 REMark ref: Computational Geometry 1985
8830 DATA 16
8840 DATA 32, 50, 18, 28, 36, 49, 61, 12
8845 DATA 22, 31, 56, 29, 19, 43, 41, 58
8850 DATA 44, 41, 36, 35, 37, 32, 34, 27
8855 DATA 26, 27, 23, 18, 15, 16, 10, 12
8860 DATA "Preparata & Shamos"
8870 REMark end of DATA for Preparata & Shamos
8880 :
8890 REMark O'Rourke data for code51
8900 REMark ref: Computational Geometry in C, 1998
8910 DATA 10
8920 DATA 31, -13, -63, -5, 87, 40, 23, 64, 0, -14
8930 DATA -76, 21, -83, -66, -94, 71, -46, -80, -57, 2
8940 DATA "O'Rourke Fig. 5.29"
8950 REMark end of DATA for O'Rourke
8960 :
8970 REMark Klette data
8980 REMark has known degeneracy with 4 co-circular
points
8990 REMark Reinhard Klette lecture notes
9000 DATA 10
9010 DATA 0, 1, 2, 2, 3, 4, 4, 5, 6, 7
9020 DATA 3, 6, 1, 4, 4, 1, 3, 5, 1, 4
9030 DATA "Klette"
9040 REMark end of DATA for Klette
9050 :
9060 REMark O'Rourke Fig. 5.5
9070 DATA 20
9080 DATA 75, 80, 48, 63, 86, 97, 90, 107, 48, 102
9090 DATA 85, 113, 77, 97, 103, 47, 101, 120, 118, 70
9100 DATA 105, 96, 91, 91, 89, 89, 88, 88, 77, 76
9110 DATA 71, 70, 65, 65, 65, 53, 44, 29, 26, 24
9115 DATA "O'Rourke Fig5.5"
9120 :
9130 REMark add the following (used in GG#24 )to this
listing:
9140 REMark FuNction dist_btwn(xpt,ypt,x,y)
9150 REMark FuNction angl_frm(xf,yf,xt,yt)
9160 REMark PROCedure SWAP (n1,n2)
9170 REMark FuNction CYC (Number%,cycle_length%)
9180     :
9190 REMark end of Listing D2V_bas
```

QPCPrint - or how to invent the wheel again

Ewald Ikemann

I have used QPC for a short while, although not as much as it should be. I really like SMSQ and the QL and everything related to it. I was very active in the scene some years ago, but my job education forced me to change to a PC with DOS and Windows. When I heard about QPC2 I had a look upon it and I was convinced by QPC2V3. All works fine except printing...
Most of the printers you can get nowadays are GDI-Windows printers with a minimum of their own intelligence. A simple printing to par1 would not give the results you would expect. The most used make of printer in the QL scene is Epson with it's ESC/P2 standard. So why not let Windows do the work?

The first problem was: Is Windows able to print all of the SMSQ characters? Native Windows ASCII isn't, but the standard called Unicode is. Normal ASCII uses 8 bits to code the characters whereas Unicode uses 16 bits for this. Unfortunately not every Windows font supports all characters and only some (Arial, Times Roman and Courier New) support all the characters SMSQ uses. The other fonts omit the characters 172 to 176, 178 and 188 to 191 and instead of the currency symbol 183 there is another Euro sign..
The next item was to built a structure that interprets the ESC-sequences of ESC/P2.

To make things short: this project is under construction.
Text output works quite well, but TEXT87 isn't working as expected because the character widths of Arial and Times Roman are not the same as those of ESC/P2.
Graphic printing is on the to-do list. Also colour text printing. Some other features that come to mind are the direct printing of QL screens and PE-save areas.
For such a project there is a German proverb: "you can't see the forest because of all the trees". What I want to say with this: without help, you can't find all the bugs. So I'm looking out for some beta-testers. The first 10 people who send me an email will get the actual beta demo version.
Ok, who has the time to be beta tester? Please email:
ewald.ikemann@muenster.de
Subject 'betatester'

Running QPC2 from CD

Dilwyn Jones

I'm in the habit of using QPC2 at work, but we are (perhaps understandably) discouraged from installing our own software in the office. My way around this has been to make a CD-ROM version of QPC2, virus check that using an approved program, then run QPC from that, on the assumption that once a CD is finished, it cannot subsequently be infected.
CD writers are so cheap these days (decent ones start from about £60 for a PC). If you are a QPC2 user like me, it can be very convenient to burn a copy onto CD to use wherever you have a suitable PC with a CD-ROM drive! In other words, the beast can be tamed...
The system we use at work is based on Windows 2000, but this should work on any Windows system upon which QPC2 will run, anything from Windows 95 onward.
My system allows for all your required QL programs to be in a QXL.WIN container on the CD, so QL programs can be run from there. Any files needing updating or saving will have to be on a floppy disk, or you can bite the bullet and create a QXL.WIN on the work PC concerned. I always use QDOS format floppy disks to reduce the risk of accidentally transferring viruses between my home and work systems.
First, you have to configure a copy of QPC2 to your requirements, and this will have to be done either using the copy on your own computer, or make a temporary copy on a floppy or zip drive, anywhere where you can make and save configuration data. You will need to alter the configuration so that the program runs from the correct location and the devices are set up for the program to find the drives and QXL.WIN concerned.
The files you will need to copy onto a CD are as follows:

- QPC2.EXE
- SMSQE.BIN
- REGISTER.KEY
- Your QXL.WIN

Optional extras - copies of the other files that come with QPC2!

My CD-R has just one folder on it, called simply QPC. It contains the first 3 files listed (QPC2.EXE, SMSQE.BIN and REGISTER.KEY).
Outside the QPC directory, in the root directory, I put a copy of my main QXL.WIN. Since this is 200MB in length, and most CDRs will hold at least 650MB, there is ample room to hold a QXL.WIN that will hold just about every QL program you are likely to have!
Before you create the CD, you need to configure QPC2 with the settings you think you'll need, e.g. which drive is WIN1_, which is DOS1_ and so on. Obviously, you can use the WIN_DRIVE command once in QPC2, or even make temporary unsaved changes in the QPC2 configuration dialogue as it starts from CD, but it is best to save the settings you think you'll need, for maximum convenience.

The four main ones to set are:

- The WIN drives
- The DOS drives
- The printer device
- The preferred screen resolution at startup

In my case, the office PCs have one hard drive called drive C:\ and one CD-ROM drive called drive D:\

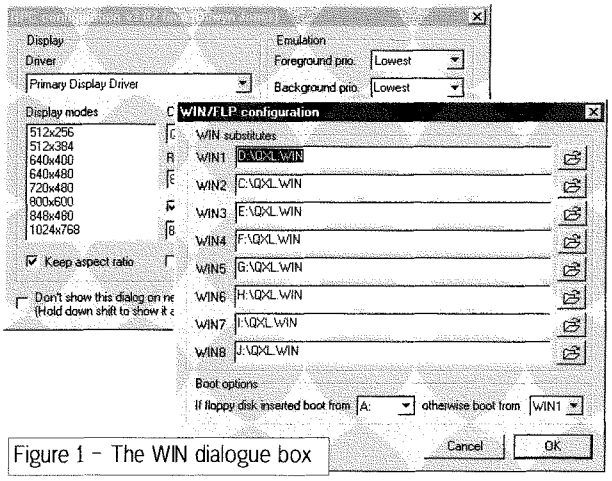


Figure 1 - The WIN dialogue box

Since I had no intention of creating a QXL.WIN on the office PCs (didn't want the company to get an inferiority complex!), all my programs were in the QXL.WIN on the CD-ROM, so it made sense to assign WIN1_ to be C:\QXL.WIN and for WIN2_ to be D:\QXL.WIN in case I ever did change my mind! The DOS devices can be just about anything you want them to be as allowed by the QPC2 naming conventions. I just left DOS1_ as drive C:\ DOS2_ as drive D:\ and so on. In fact, it can be useful if running QPC2 on a networked system to give access to other PCs on the system if you know their names, e.g. our office PCs are called man (manager's PC), pla (PLA staff's PC and eng (engineer's PC), so I could have made DOS1_ be \\man\C:\ DOS2_ be \\pla\C:\ and DOS3_ be \\eng\C:\ and so on if I particularly wanted to access shared files from PC to PC (e.g. if we ever had a Quanta workshop in our office!). You need to be a little careful with the DOS device names as QPC2 doesn't yet have a DOS_DRIVE command to set the names at runtime (the WIN_DRIVE command allows the WIN device names to be set for drives 1 to 8 during a QPC2 session).

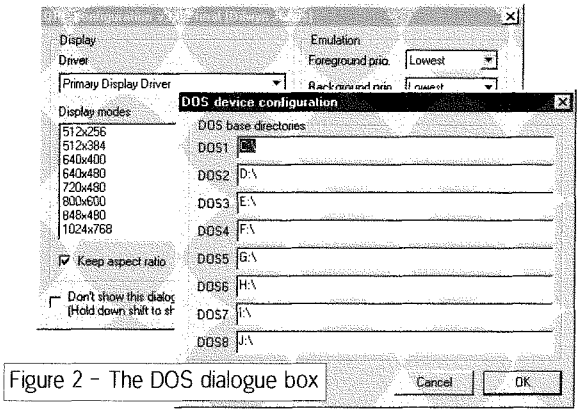


Figure 2 - The DOS dialogue box

Our office printer is a shared printer on the manager's PC, accessed with the name \\man\HPLaserJ\ so I set the printer port to 'printer' and let Windows sort all that out.
The \\name\ names above are examples of what the PC world calls UNC names, or Universal Naming Conventions. Don't ask. The QL makes it nice and easy with names like n1_ (or s1_ or m1_ if using Sernet or Midinet).

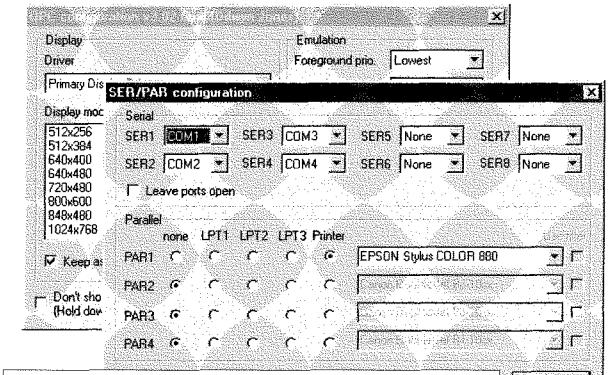


Figure 3 - The Printer and Serial ports dialogue box

For screen resolution, most PCs these days are 800x600 or greater resolution, so really you can use any setting here. 512x256 will give maximum compatibility with older software, or if you wish to run multiple incarnations of QPC2 for any reason - run Windows in 1024x768 or higher resolution and have a 512x256 or 512x384 resolution QPC2 in each corner of the screen just for fun! Also, bear in mind that each QPC2 can use a different display driver if the PC has two video output

CAMBRIDGE Z88

OFFICE/FAX 01494-871319 (EEC) *W.N. Richardson & Co.*

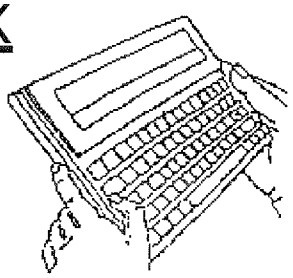
MOBILE: 07808 576118

E-MAIL: WNR@COMPUSERVE.COM

6 Ravensmead
Chalfont-St-Peter
Buckinghamshire SL9 0NB

THE IDEAL PORTABLE COMPANION FOR THE QL, PC AND MAC.

THE CAMBRIDGE Z88 A4 NOTEBOOK



WITH BUILT-IN WORD PROCESSOR, SPREADSHEET, DATABASE, BASIC, CALCULATOR, CLOCK, ALARM, CALENDAR & VT52 TERMINAL.
USES 4XAA ALKALINE CELLS (ca. 20 HOURS) *

WE DO REPAIRS, PART EXCHANGES, AND BUY Z88's & PARTS

NEW! CAMBRIDGE Z88 WITH OZ4+512k Internal Ram £150

ALSO AVAILABLE, 512k RAMPACK £40

DESCRIPTION	UK	USA
CAMBRIDGE Z88 ISSUE4-128K	**£120**	**$180**
CAMBRIDGE Z88 COMPUTER	**£99**	**$130**
☆**RECONDITIONED Z88**	**£60**	**$90**
32k RAMPACK	£18	$25
128k RAMPACK	£38	$50
32k EPROM PACK	£18	$25
128k EPROM PACK	£24	$33
256k EPROM PACK	£55	$75
EPROM ERASER	£32	$43
PARALLEL PRINTER LEAD	£39	$50
SERIAL PRINTER LEAD	£12	$16
* **MAINS ADAPTOR (230vac; 6v,500ma)**	**£10**	
TOPPER (PROTECTIVE COVER)	£12	$16
CARRYING CASE (PLASTIC)	£10	$12

1/2 PRICE STARTER PACK
1 - Z88 ☆ PLUS
TRANSFER KIT
+ 32K RAM
+ 32K EPROM
£72 ONLY!!

FILE TRANSFER TO OTHER COMPUTERS		
SPECIAL Z88-QL SERIAL LEAD	£10	$15
COPY DISKS OF QUANTA PROGS IMP/EXP & ARCHIVE EXPORT	£2	$3
PCLINK KIT (For PCs)	£25	$35
Z88 TO MAC KIT	£25	$35
Z88 TO BBC KIT	£25	$35

} ALL WITH INSTRUCTION BOOKS, CABLES AND EPROMS AS REQUIRED!

POSTAGE UK UP TO £5. EEC £15. USA £20. OTHER COUNTRIES £30.

ALL THE STOCK IS WARRANTIED FOR 90 DAYS. IN THE EVENT OF REPLACEMENT BEING ARGREED, BUT THE ITEM BEING OUT OF STOCK AT THE TIME, A REFUND WILL BE MADE PROVIDED THE ITEM IS RECEIVED IN GOOD CONDITION.

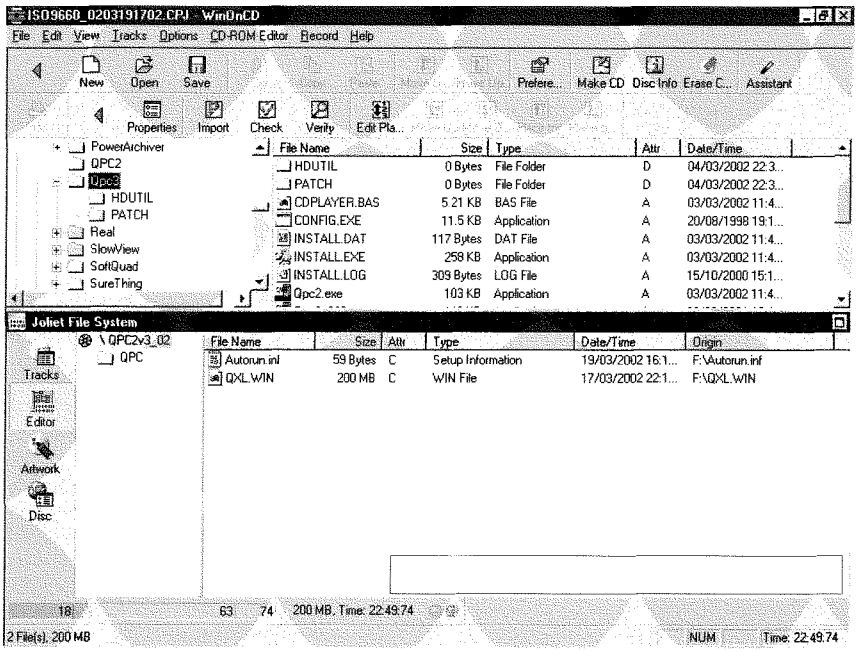
QL & PC COMPUTER USERS WILL FIND THE CAMBRIDGE Z88 ESPECIALLY USEFUL FOR WORK AWAY FROM THE DESKTOP, WITH TRANSFER PROGS DATA CAN BE SAFELY EXCHANGED WITH THEIR DESKTOP SYSTEM.

W.N.RICHARDSON & CO CONTINUES TO PROVIDE FULL SPARES AND SERVICES FOR SINCLAIR COMPUTERS, QL & THE CAMBRIDGE Z88

cards, handy for presentations or other multi-screen work. Quite remarkable what a modern version of QPC can do!

Figure 1 shows the QPC2 WIN configuration dialogue box. Figure 2 shows the QPC2 dialogue box for the DOS device and Figure 3 the Printer and Serial ports dialogue box.

Figure 4 shows a screen dump of the PC software I used to create the CD in the first place. I mention this to run in the fact that as yet there is no SMSQ/E software to create CD-ROMs, so someone please take the hint and write it – I don't want to have to resort to Windows or Linux every time I want to do something on my computer at home!



In order to make the CD run automatically on being inserted in a CD drive on a PC, I created a file called autorun.inf on the CD. This is a simple text file which if found on a CD will cause the PC to run the content of the CD automatically as long as Auto-Insert-Notification is turned on in Windows (in Windows 95 for example, go into Control Panel, double click on the System menu, click on the Device Manager tab then click on the CD-ROM drive and Properties, then on the Settings tab, ensure that the square next to Auto insert notification has a tick in it. (If that makes no sense to you, just bear in mind it's a PC running Windows after all!)

Figure 5 shows the autorun.inf which you can create as a text file using Notepad in Windows. Ensure the file is typed in with the three lines of text exactly as shown or it won't work properly.

```
[autorun]
open=QPC\Qpc2.exe
defaultopen=QPC\Qpc2.exe 0
```

Figure 5 – The autorun.inf file

If, having created a CD with autorun.inf on it, you don't want the CD to run automatically after all, you can either turn off auto-insert notification on the computer in question or (rather easier) just hold down the left hand SHIFT key on the PC as you insert and start up the CD, which suppresses autorun.

Once the CD has been written, labelled and so on you are ready to go! Just insert the CD and with luck QPC2 will start and go. If necessary you can use the opening configuration dialogue to make minor temporary changes to QPC2 for the computer it's actually running on.

In summary, to make a runnable QPC2 CD-ROM, just copy qpc2.exe, smsqe.bin and register.key onto a CD. Add a QXL.WIN if required (if not just run all your applications off a floppy disk just like a traditional QL), decide if you want to add a Windows autorun.inf file and that's all there is to it. Marcel Kilgus (the author of QPC2) has done all the hard work for us, all we have to do is make the CD. I've been using this for a while now and it's proved to be a great QL asset for me.

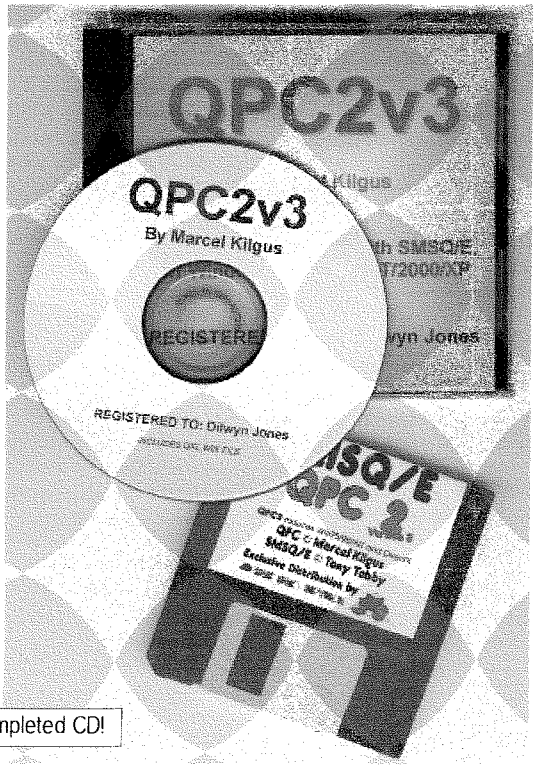


Figure 6 – The completed CD!

QL Cycle Trail

Tony Firshman

Dates and details might be approximate as I have been asked to write this a few seconds before the QL Toady deadline! Every year I have memorable show stories, but I would have to do a lot of research to get it all right. Maybe that is an excuse for a Show Trail series.

1984 - Heard about QL from a journalist who went to the press launch in Jan 84. Ordered my QL for £399 on Jan 25th. Received an FB with dongle end-May. A real revelation after my UK101 with cassette drive. Opened it in Henry's, Edgware Road in June, as they (and me!) were keen to see inside. Stuck back the undamaged guarantee stickers. Sent it back to Cambridge November for dongle removal. Lost in the post. Bought another with insurance money.

1985 - Bought second QL again for £399. Found Archive database limited to 300 records - as it only had 12k working space. Both QLs crashing all the time. Got Archive V2.1 from Mustak Shakes in the street outside Psion "It is not officially released yet". Much faster than the first version, and gave a vast 30k free.....

1986 - QL still crashing - link crashes to my washing machine spin cycle. Develop Computer Cleaner, which stops crashes. Appear at ZX Microfairs with Computer Cleaners. Publicity gets mentions in all major computer mags and start advertising in QL User and further afield. A lot of sales to Government bodies. Bought Medic Disk drive - arrived uncased. Drove to Basingstoke and collected case. Saw bucket loads of microdrive cartridges for their games offer. Bought ridiculously expensive but heavy duty Brother dot matrix printer for use with the QL (see 2002)

1987 - Get boxes of QL parts from Sid Day. Start to repair QLs. Meet Nasta in Eindhoven - he has an LCD screen working on a QL.(I am sure the year is wrong here)

1988 - Start QBBS with V23 Astracom modem and Medic Disk drive, using Jan Bredenbeek's revolutionary BBS software - ran off 2 floppy disks. This starts the unbroken 24 hours QBBS run right to the present day. Have serial port problems. Meet Laurence Reeves who is keen to solve serial port problems on the QL. Upgrade BBS to V22 Astracom. Meet Tony Price on QBBS, and have mutual complain about QL Terminal software - QL Terminal evolves. Started selling Minerva. Start selling Astracoms. Use switch box to divert fax calls to Amstrad 1512. Get married to Sarah.

1989 - Hermes solves serial problems on the QL. Sell 45 at Eindhoven launch. V22bis Astracom launched - Tony Price wrote the firmware. Ben born. Unearth some 'lightpens' from DS Enterprises, who were totally at sea. Find they are bar code readers, and develop software for the QL. Hard disk on the BBS. Started QL mailshots.

1990 - Ben destroys my AST laptop floppy disk - he is getting interested in computers! Repair 35 QLs one month. Helped Freddy Vaccha with a 2000 people mailshot.

1991 - BBS upgraded to 14400 bps modem and superGoldcard and Connor 120mb hard disk. First I2C devices (parallel/analogue) designed on a train to a Glasgow QL show. Get my first Brompton folding bicycle and start the foreign trip cycling habit with Stuart Honeyball.

1992 - Moved to Ascot. First self-contained QL office outside the house. No more arguments about the boxes in the hall. Design power driver I2C interface. Bought vast quantity of newly manufactured membranes - but they had a hole missing! Spend 8 hours with Phil Borman rescuing my hard disk partition.

1993 - BBS converted to PBOX software, supporting incoming fax on a QL. Fitted in case with std QL keyboard on ribbon cable, and 120mb hard disk.

Design relay interface to plug into I2C power driver. Another 6 hours with Phil Borman rescuing my hard disk.

1994 - Started superHermes design – spend hundred of hours on phone to Laurence Reeves. If only we had been on internet.

1995 - superHermes launched at Oakridge, USA. 15 sold – but only emulated current Hermes, due to last minute bug found in the PIC. Full working version released in October, with expensive (to us) upgrades to earlier purchasers. Laurence devises a PIC remover using a paper clip. BBS upgraded to Aurora + superHermes with I2C external temperature measurement via Minerva MKII.

1996 - Discover internet. QBBS use starts dropping. Try to cycle out of Boston airport on bicycles and get flagged down on the freeway by a gun wielding cop. "How can we get out" we say "There is no road for bicycles" he says. Stuart and I climb over barriers and find our way to the non-public exit road. Get drowned cycling through evening to the QL show.

1997 - Romdisq launched. Move to Tring. Even larger office in the garden, with power, 2 tel lines, QL network, PC network and door bell – 150 feet to the main house. 1998 QBBS upgraded to 256mb main drive (off a surplus 3.4gb with dodgy areas above 1gb) and 23 256mb backup partitions on 6.4gb secondary. Still get lost primary hard disk file tables, but backups mostly OK. Motorway crash on the way to Croatia. Rest of this saga here courtesy of Volvo – it is a very tough car!

1999 - BBS upgraded to Mplane and RomDisq fitted, loading Qubide and superHermes drivers. Courtesy of Mplane, more hard disk failures. Started manufacturing Q40.

2000 - Mail to 2000 people for QL 2000 show – with postcard return to stay on QL mailing list. Get very few returns, and few emails. Start QL emailshot list and get 400 on the list. Eventually get my money for the 1998 car crash courtesy of the ombudsman – interviewed by Radio 4.

2001 - First QL emailshot – 100 bounced emails. Visit Bill Cable by plane/bus/bicycle to install spring water system – and find time to visit the Montreal QL show. Get a phone call for 8049s – someone had found me via my web site. No good of course as QL specific, but sell him 200 8749s from my QL source. Makes more profit than the whole QL business that year, but always worth keeping a QL mention on the web. Compswitch launched. Tony 'six-sheds' Firshman interviewed on Radio 4. Another shed (photographic darkroom) arrives later.

2002 - More QL emailshots – but now with over 400 good emails. Snailshots get very small and cheap. Eindhoven venue confirmed for a further 3 years – more Chinese buffets on the cards. Brother 2024L still going strong – mainly used for labels. Now used for fax printing, as JH's 'HP PCL' not liked by new Brother 1250 laser (even though it emulates HP). Goodness knows how much I have exceeded the 2024 printhead life – but WD40 keeps it going. Talk to CUPS (Cambridge University Computer Preservation Society) on "Sinclair QL – new developments. 1984 to 2002" – April 30th in Cambridge. Asked Laurence Reeves if he was a member when he was a Cambridge – realised later that he was there _before_ the computers they are preserving existed. Realise that I will take the QL with me to my grave.

SO, WHO IS NEXT LETTING US KNOW HIS MILESTONES?

An Apple a Day

Jim Hunkins

Now this is crazy! By the time this is printed, I will have returned from a trip to Australia in which I had to figure out what to do for nearly 14 hours on a plane. Let's see, I have to get QDT (QL DeskTop) done for shipment later this year and there is no PC laptop that I can afford that many batteries for (and, no, I can't afford to fly business class or better where you can just plug in – sigh).

So what I will have done for this long flight is to grab my Apple Titanium notebook running OS X (1 battery = 4–5 hours), make sure the Virtual PC emulator is on it with an image of my Windows 98 disk which includes Marcel's QPC (the latest revision with power savings capabilities) which is what I am using to develop QDT with. Got it, not lost yet. Awesome!

In other words, I am able to run my SMSQ/E system on a Mac. It required another emulator in between (an emulator to run an emulator) but it works! To be honest, there are some limits to what you can do. See the end of this for recommendations and performance comments.

As anyone who deals in operating systems and software probably realizes, to do an emulator which runs fast enough such as QPC takes some pretty fancy programming, often using some barely 'legal' programming methods. And Marcel has done just that with his excellent QPC emulator.

What amazed me was how well it ran under Virtual PC on the Mac systems on my first try. I noticed that a few pieces of my boot file had some weird stuff going on, and that occasionally the input would get 'stuck' momentarily and force CAPS or send the mouse cursor off the screen. But it always recovered. Then I ran one of my QDT components. It looked fine, that is if you didn't want to see any of the graphical components (icons, boxes, etc).

Now the story gets interesting. I mentioned this little problem to Marcel and he threw back a few comments (they were very constructive). I did some additional testing and sent my results to Marcel. And he send back some more suggestions along with some code to test things. After some fast and interesting back and forth, we found that something was happening to the floating point results.

Two major observations gave clues. In basic, some numbers were becoming all '0's. This was obvious with the line 'Z$=INKEY$(-1)' becoming 'Z$=INKEY$(0)', which does not wait for a keyboard entry.

The other clue was that the graphics that I was drawing used a floating point horizontal correction, which changed all the 'x' coordinates to 0. This resulted in nothing visible on the screen (actually, everything at one pixel location – not very visually appealing or useful). With some additional information from Marcel, we were able to confirm this through some other tests and behavior anomalies.

Since QPC worked perfectly on many different PCs and Windows platforms, it seemed that the problems would be something wrong with the Virtual PC emulator. After posting a message in one of the Connectix (Virtual PC) forums, I received an offer of assistance from the Virtual PC chief architect. Marcel had an idea and sent some sample Windows code, which allowed the Virtual PC people to find the problem right away. As of a couple of days ago, I have been able to test their updated Virtual PC build and find that it works great. By the time this is printed, the update to Virtual PC 5 should be available for public download to Virtual PC owners.

So what was going wrong? While I won't give away coding secrets, it had to do with doing a bit of clean up and speed up under both emulators. The QL has had a history of round off errors in very small floating point showing up. And Virtual PC has similar issues due to convert ion of floating point between two hardware systems that use different component sizes (which of course are both different from QL floating point). All I will say is that it wasn't the expected very small floating point errors that do occur on very rare occasion in Virtual PC (they usually show up in PC spreadsheet displays). It did have to do with each emulator doing an extra little step to make things better.

Now that I have not actually said what was wrong, lets just say that the 'fix' only could have occurred due to the dedication and knowledge of their own product by both Marcel (QPC) and the Virtual PC guys at Connectix. And talk about great service. The entire problem report to final solution took less than 4 weeks!

The image included with this article is a good case of solid emulation. It shows OS X running on an Apple Titanium notebook, with Virtual PC running in windows mode (torture #1). Within the Windows 98 environment of Virtual PC, you can see QPC, also running in windows mode (torture #2). Within QPC you see the normal pointer environment with the buttons, a file being edited,

and QDT running in all its graphical splendor (shameless small plug).

For those of you who want to run your QPC on a Mac, here are some important notes and recommendations:

Apple Hardware and OS:

- OS X with a 500 Mhz G4 or better (tested) [performance is constantly being enhanced]
- OS 9 with a 400 Mhz G4 or 500 Mhz G3 or better
- OS X with dual 1 Ghz processors in a tower – man, speed is sweet!

Software Versions:

- Win 95 or above (tested with Win 98)
- QPC II (version 3 especially if you plan to use a notebook)
- Virtual PC Version 5 (be sure to get the latest update) (Version 4 crashed on the QPC start-up window)

Notes:

– run both Virtual PC and QPC in full screen mode
- this allows both to draw 'directly' to the screen
- you can use either or both in windowed mode but with a substantial performance penalty

– the CAPS key/SHIFT seem to occasionally stick
- solution #1: just play around with the keys for a bit and they will clear up
- solution #2: close and restart QPC
- this happens only very rarely with the floating point fixed Virtual PC version
- with the Titanium notebook, be very careful about keeping your hand/fingers away from the touchpad when you aren't using it (seems to be a major contributor to the above)
- would recommend using a mouse instead of the touchpad where possible
- I will continue to watch for the cause of this problem and will work with Marcel or Connectix to fix it (if it isn't me)

As I said, this is crazy. Got to love it!

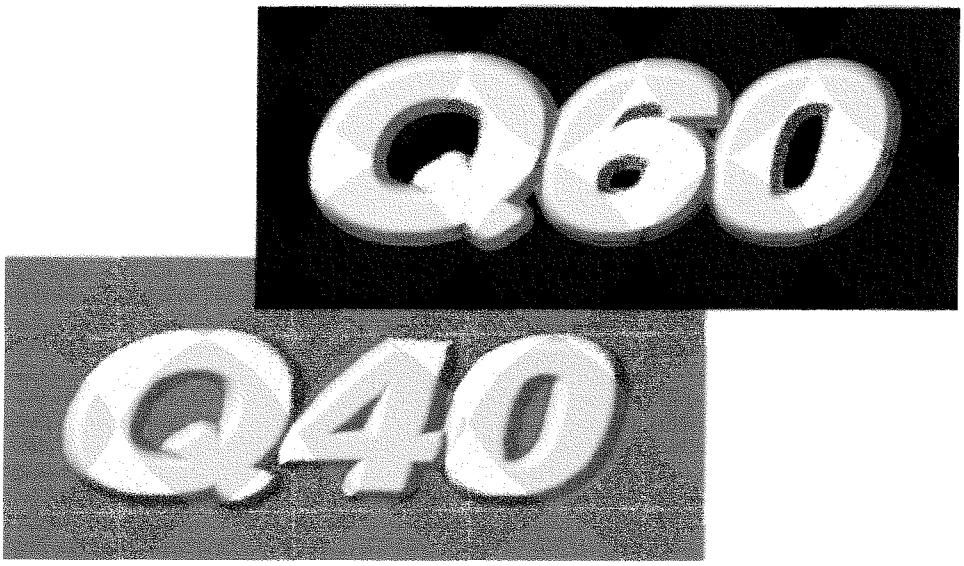
Stop the Press - latest Update

Connectix has just released the update 5.0.2 which can be downloaded from their website (www.connectix.com). It has the required fix included to run QPC and seems very stable. Any prior version of Virtual PC will have problems with floating point and related code.

Are you waiting for...

... an all new QL?
... superscalar 68060 power at up to 80 MHz?
... integration instead of tinkering with many add-ons?
... more than 65000 colours at high resolutions?
... speed and new features without losing QL compatibility?
... sampled stereo sound for QDOS and SMSQ/E?
... improved peripherals?
... full control over your system by open hardware docs?
... booting your favourite OS from ROM in a few seconds?
... a real 68060 QL instead of emulators?
... QDOS Classic and SMSQ/E with up to 160 BogoMIPS?
... even 68k Linux loading from QDOS or SMSQ/E?
... the fastest QL ever?

No more waiting.
The new Q60 has arrived!



Take the power back in your hands.

***Available from D & D Systems**, P.O. Box 5813, Ripley, Derbyshire, England DE5 9ZR*
Tel: +44 (0)1773-740170, FAX: +44 (0)1773-748399, Email: sales@q40.de

More information about the Q40i and Q60 at the official Website: http://www.q40.de, Email: info@q40.de
The Q40i is also available. It offers similar features like the Q60 at lower cost, using a 40 MHz 68040 CPU.

Programming the Pointer Environment in C - Part 2

Jerome Grimbert

In fact, if you take time to read the comment, you would have notice that some setting should have come from a config block. Making a config block in C is a bit hard (even if it can be done), but as I had already some routines and the config block in libxmenu, I will just use it.

It make the source code a little smaller:

```
#include
#include
#include
#include
#include

/* for new C68, hide startup problems */
struct WINDOWDEF _condetails =
      { (char) 0,(char) 0,(char)0,(char)4 ,
       (short)2,(short)1,(short)0,(short)0};

char _conname[] = "con_2x1a0x0";  /* mask startup problems, for old one */
char *_endmsg = NULL;     /* and stop when I say */

char _PROG_NAME[] = "PE in C tutorial 2";
static QD_TEXTI(quit,"QUIT");
static QD_TEXTI(title,"PE in C test 2");

static long ACTION_QUIT(struct WM_wwork *wwk);
struct WM_action action_quit = { JSR, wm_actli, ACTION_QUIT};

static long ACTION_QUIT(struct WM_wwork *wwk)
{
  exit(0);
}

struct WM_wstat * init_status(struct WM_wwork *wwp)
{
  struct WM_wstat *result;
  /* Default struct has 40 loose item, that's enough */
  result=(struct WM_wstat *)malloc(sizeof(struct WM_wstat));
  result->wwork = wwp;
  wwp->wstat = result;
  result->wdef = NULL;
  result->chid = 0;
  result->swnr = result->xpos = result->ypos = 0;
  result->kstk = result->kprs = 0;
  result->evnt = 0;
  result->xsiz = result->ysiz = result->xorg = result->yorg = 0;
  result->ptpsx = result->ptpsy = 0;
  result->wmode = FORM_QL4; /* THIS is important */
  result->spar0 = 0;
  result->spar1 = 0;
  result->ciact = NULL;
  result->citem = -1;
  result->cibrw = result->cipap = result->cispr =
  result->cihxs = result->cihys = result->cihxo =
  result->cihyo = 0;
  result->litem[0] = 0;
  return result;
}

struct WM_wwork * init_window()
{
  struct WM_wwork * result;
  struct WM_litm *loose_list;
  struct WM_infw *infw_list;
  struct WM_info *info_list;
  info_list=(struct WM_info *)malloc(sizeof(struct WM_info)*2);
```

```
info_list[0].xsize=14*6;
info_list[0].ysize=10;
info_list[0].xorg=0;
info_list[0].yorg=0;
info_list[0].type=TYP_TEXT;
info_list[0].spar=0;
info_list[0].attr.t.ink=0; /* Should be from a config block */
info_list[0].attr.t.cwid=0;
info_list[0].attr.t.chgt=0;
info_list[0].pobj=&title;
info_list[1].xsize=-1; /* end of list */

infw_list=(struct WM_infw *)malloc(sizeof(struct WM_infw)*2);
infw_list[0].xsize=14*6;
infw_list[0].ysize=10;
infw_list[0].xorg=2;
infw_list[0].yorg=3;
infw_list[0].flag=0;
infw_list[0].borw=0;
infw_list[0].borc=0;
infw_list[0].pobl=info_list;
infw_list[1].xsize=-1;
SetInfoColour(infw_list,DefaultColourSet());

loose_list=(struct WM_litm *) malloc(sizeof(struct WM_litm)*2);
loose_list[0].xsize=4*6;
loose_list[0].ysize=10;
loose_list[0].xorg=15*6;
loose_list[0].yorg=3;
loose_list[0].xjst=0;
loose_list[0].yjst=0;
loose_list[0].type=TYP_TEXT;
loose_list[0].skey=K_CANCEL;
loose_list[0].pobj=&quit;
loose_list[0].pact=&action_quit;
loose_list[0].item=0;
loose_list[1].xsize=-1; /* end of list */

result = (struct WM_wwork *) malloc(sizeof(struct WM_wwork));
SetWindowColour(result,DefaultColourSet());
result->wstat=NULL; /* filled later */
result->chid =0;
result->pprec=NULL;
result->psave=0;
result->spar1=0;
result->spar2=0;
result->spar3=0;
result->pulld=0;

result->splst=NULL;
result->xsize=20*6;
result->ysize=16;
result->xorg=20; /* initial position of mouse */
result->yorg=8;

result->flag=1;
result->borw=1;
result->sprite=NULL; /* default pointer */
result->curw=1;
result->ublob=NULL;
result->upatt=NULL;
result->ablob=NULL;
result->apatt=NULL;
result->sblob=NULL;
result->spatt=NULL;

result->help=NULL;

result->ninfo=1;
result->ninob=1;
result->pinfo=infw_list;
```

```
  result->nlitm=1;
  result->plitm=loose_list;

  result->nappl=0;
  result->pappl=NULL;
  return result;
}


main()
{
  struct WM_wwork *wwp;
  struct WM_wstat *wsp;

  /* text may become a problem if started in mode 8
  ** but the high_color has no problem to work like mode 4
  ** So, to simplify our setting, if it's mode 8, then
  ** this program will want to run in mode 4... assuming
  ** that all hardware who support mode 8 also have mode 4
  **
  */
  short mode,type;
  mode =-1;
  type=-1;
  mt_dmode(&mode,&type);
  if (mode==8) { mode=4; mt_dmode(&mode,&type);}

  /* Create the window structure */
  wwp = init_window();
  wsp = init_status(wwp);

  wwp->chid = fgetchid(stdout);
  if (!(wm_findv(wwp->chid)))
  {
   exit(-1); /* there is no PE here, so stop */
  }

  /* show the window, at the mouse pointer */
  wm_prpos(wwp,-1,-1);
  wm_wdraw(wwp);

  /* Now, let's get the events */
  while (!wm_rptr(wwp))
  {

  }

  exit(0);
}
```

The result is similar on the screen, excepted that this time, we have a config block to play with in the program.

It's now time to add some more loose items: the three most classical, that is sleep, move and resize.

```
#include
#include
#include
#include
#include
/* for new C68, hide startup problems */
struct WINDOWDEF _condetails =
      { (char) 0,(char) 0,(char)0,(char)4 ,
       (short)2,(short)1,(short)0,(short)0};
```

```
char _conname[] = "con_2x1a0x0";  /* mask startup problems, for old one */
char *_endmsg = NULL;     /* and stop when I say */
```

No change so far.

```
char _PROG_NAME[] = "PE in C tutorial 3";
static QD_TEXTI(quit,"QUIT");
static QD_TEXTI(title,"PE in C test 3");
```

Just a quick change in the name of the program. Nothing really important here.

```
static long ACTION_QUIT(struct WM_wwork *wwk,struct WM_litm *li);
struct WM_action action_quit = { JSR, wm_actli, ACTION_QUIT};
static long ACTION_MOVE(struct WM_wwork *wwk,struct WM_litm *li);
struct WM_action action_move = { JSR, wm_actli, ACTION_MOVE};
static long ACTION_ANY(struct WM_wwork *wwk,struct WM_litm *li);
struct WM_action action_size = { JSR, wm_actli, ACTION_ANY};
static long ACTION_SLEEP(struct WM_wwork *wwk,struct WM_litm *li);
struct WM_action action_sleep = { JSR, wm_actli, ACTION_SLEEP};
```

Notice that there is now some additional routines. There code is to come hereafter.

```
static long ACTION_QUIT(struct WM_wwork *wwk, struct WM_litm *li)
{
  exit(0);
}

static long ACTION_MOVE(struct WM_wwork *wwk, struct WM_litm *li)
{
  short dx,dy;
  wwk->wstat->evnt |= PT_WMOVE; /* set event bit for wm_chwin */
  wm_chwin (wwk,&dx,&dy);   /* move window */
  wwk->wstat->litem[li->item]= WSI_MKAV;
  return wm_ldraw(wwk,-1);
}
```

The handling of move is done directly by the PE (thanks to the call to wm_chwin). Once moved, we just reset the loose item back to available and ask for a redraw of the loose items.

```
static long ACTION_SLEEP(struct WM_wwork *wwk, struct WM_litm *li)
{
  wwk->wstat->litem[li->item] = WSI_MKAV;
  wm_ldraw(wwk,-1);
  return PT__ZZZZ;
}
```

The handling of Sleep is delayed to later, because we are going to change a lot of the window.

```
static long ACTION_ANY(struct WM_wwork *wwk, struct WM_litm *li)
{
  return li->skey+14;
}
```

That's a default handler. It might be more useful later.

```
struct WM_wstat * init_status(struct WM_wwork *wwp)
{
  struct WM_wstat *result;
  /* Default struct has 40 loose item, that's enough */
  result=(struct WM_wstat *)malloc(sizeof(struct WM_wstat));
  result->wwork = wwp;
  wwp->wstat = result;
  result->wdef = NULL;
  result->chid = 0;
  result->swnr = result->xpos = result->ypos = 0;
  result->kstk = result->kprs = 0;
  result->evnt = 0;
  result->xsiz = result->ysiz = result->xorg = result->yorg = 0;
  result->ptpsx = result->ptpsy = 0;
```

```
  result->wmode = FORM_QL4; /* THIS is important */
  result->spar0 = 0;
  result->spar1 = 0;
  result->ciact = NULL;
  result->citem = -1;
  result->cibrw = result->cipap = result->cispr =
  result->cihxs = result->cihys = result->cihxo =
  result->cihyo = 0;
  result->litem[0] = 0;
  result->litem[1] = 0;
  result->litem[2] = WSI_UNAV;
  result->litem[3] = 0;
  return result;
}
```

Nearly as before. Just knowing about the 4 loose items this time (The resize is unavailable). The code of init_window has now to position the additional loose items.

```
struct WM_wwork * init_window()
{
  struct WM_wwork * result;
  struct WM_litm *loose_list;
  struct WM_infw *infw_list;
  struct WM_info *info_list;

  info_list=(struct WM_info *)malloc(sizeof(struct WM_info)*2);
  info_list[0].xsize=14*6;
  info_list[0].ysize=10;
  info_list[0].xorg=0;
  info_list[0].yorg=0;
  info_list[0].type=TYP_TEXT;
  info_list[0].spar=0;
  info_list[0].attr.t.ink=0; /* Should be from a config block */
  info_list[0].attr.t.cwid=0;
  info_list[0].attr.t.chgt=0;
  info_list[0].pobj=&title;
  info_list[1].xsize=-1; /* end of list */

  infw_list=(struct WM_infw *)malloc(sizeof(struct WM_infw)*2);
  infw_list[0].xsize=14*6;
  infw_list[0].ysize=10;
  infw_list[0].xorg=2;
  infw_list[0].yorg=3;
  infw_list[0].flag=0;
  infw_list[0].borw=0;
  infw_list[0].borc=0;
  infw_list[0].pobl=info_list;
  infw_list[1].xsize=-1;
 SetInfoColour(infw_list,DefaultColourSet());

  loose_list=(struct WM_litm *) malloc(sizeof(struct WM_litm)*5);
  loose_list[0].xsize=4*6;
  loose_list[0].ysize=10;
  loose_list[0].xorg=15*6;
  loose_list[0].yorg=3;
  loose_list[0].xjst=0;
  loose_list[0].yjst=0;
  loose_list[0].type=TYP_TEXT;
  loose_list[0].skey=K_CANCEL;
  loose_list[0].pobj=&quit;
  loose_list[0].pact=&action_quit;
  loose_list[0].item=0;

  loose_list[1].xsize=24;
  loose_list[1].ysize=10;
  loose_list[1].xorg=32;
  loose_list[1].yorg=16;
  loose_list[1].xjst=0;
  loose_list[1].yjst=0;
  loose_list[1].type=TYP_SPRITE;
  loose_list[1].skey=K_MOVE;
```

JOCHEN MERZ SOFTWARE

Im stillen Winkel 12 D-47169 Duisburg
Tel. 0203 502011 Fax 0203 502012
http://www.j-m-s.com/smsq/index.htm

SMSQ/E Prices

Due to changes in the licensing structure we are happy to be able to reduce the prices for all SMSQ/E products!

QPC2 Version 3 with SMSQ/E

New Version with complete manual EUR 99,90

Upgrade to QPC2 Version 3

From QPC1 (or just QPC - the first QPC!)	EUR 69,90
From QPC2 Version 1 (or just QPC2)	EUR 44,90
From QPC2 Version 2	EUR 20,40

You will receive a new QPC part of the manual. Please return QPC master disk. Please note: QPC1 will not be supported on this disk anymore. If you want to continue to use QPC1, then please make a backup-copy of the QPC master disk before you return it to us.

All other SMSQ/E

for GoldCard/SuperGoldCard or QXL or ATARI
price per Version EUR 49,90

TERMS OF PAYMENT

Postage and package **[Germany]** EUR 4,86 (if total value of goods is up to EUR 25,- then only EUR 3,32).
[Europe] £4,50 / EUR 7,41 (if total value of goods is under £15 / EUR 25,56 then only £3 / EUR 4,86).
[Overseas] between US$7.50 (1 item) and US$17.50 (maximum).
Cheques in EURO and International Money Order in EURO (both have to be drawn on German banks).
We accept Internation Reply Coupons as payment (can bo bought at any post office): 1 IRC = EUR 1.02 redeeming value.
Exact prices are given in EUR ... the price in £ and/or US$ are approx. conversion based on the exchange rate at the time of creation of this ad. Prices may be adjusted in case the exchange rate falls considerably out of this range in both directions!
We can charge your credit cards in £'s, US$, EURO or in DM - please state the currency you prefer.
Please do not send any UK bank cheques in £ - our banks have increased the fee for handling them by 600% (no joke!) so we cannot accept them anymore, unless you add £6 for clearing the cheque.
E&OE.

EUROCARD. Master Card VISA

```
  loose_list[1].pobj=&wm_sprite_move;
  loose_list[1].pact=&action_move;
  loose_list[1].item=1;

  loose_list[2].xsize=24;
  loose_list[2].ysize=10;
  loose_list[2].xorg=60;
  loose_list[2].yorg=16;
  loose_list[2].xjst=0;
  loose_list[2].yjst=0;
  loose_list[2].type=TYP_SPRITE;
  loose_list[2].skey=K_SIZE;
  loose_list[2].pobj=&wm_sprite_size;
  loose_list[2].pact=&action_size;
  loose_list[2].item=2;

  loose_list[3].xsize=24;
  loose_list[3].ysize=10;
  loose_list[3].xorg=4;
  loose_list[3].yorg=16;
  loose_list[3].xjst=0;
  loose_list[3].yjst=0;
  loose_list[3].type=TYP_SPRITE;
  loose_list[3].skey=K_SLEEP;
  loose_list[3].pobj=&wm_sprite_sleep;
  loose_list[3].pact=&action_sleep;
  loose_list[3].item=3;

  loose_list[4].xsize=-1; /* end of list */

  result = (struct WM_wwork *) malloc(sizeof(struct WM_wwork));
  SetWindowColour(result,DefaultColourSet());
  result->wstat=NULL; /* filled later */
  result->chid =0;
  result->pprec=NULL;
  result->psave=0;
  result->spar1=0;
  result->spar2=0;
  result->spar3=0;
  result->pulld=0;

  result->splst=NULL;
  result->xsize=20*6;
  result->ysize=30;
  result->xorg=20; /* initial position of mouse */
  result->yorg=8;

  result->flag=1;
  result->borw=1;
  result->sprite=NULL; /* default pointer */
  result->curw=1;
  result->ublob=NULL;
  result->upatt=NULL;
  result->ablob=NULL;
  result->apatt=NULL;
  result->sblob=NULL;
  result->spatt=NULL;

  result->help=NULL;

  result->ninfo=1;
  result->ninob=1;
  result->pinfo=infw_list;

  result->nlitm=1;
  result->plitm=loose_list;

  result->nappl=0;
  result->pappl=NULL;
  return result;
}
```

```
main()
{
  struct WM_wwork *wwp;
  struct WM_wstat *wsp;

  /* text may become a problem if started in mode 8
  ** but the high_color has no problem to work like mode 4
  ** So, to simplify our setting, if it's mode 8, then
  ** this program will want to run in mode 4... assuming
  ** that all hardware who support mode 8 also have mode 4
  **
  */
  short mode,type;
  mode =-1;
  type=-1;
  mt_dmode(&mode,&type);
  if (mode==8) { mode=4; mt_dmode(&mode,&type);}

  /* Create the window structure */
  wwp = init_window();
  wsp = init_status(wwp);

  wwp->chid = fgetchid(stdout);
  if (!(wm_findv(wwp->chid)))
  {
   exit(-1); /* there is no PE here, so stop */
  }

  /* show the window, at the mouse pointer */
  wm_prpos(wwp,-1,-1);
  wm_wdraw(wwp);

  /* Now, let's get the events */
  while (!wm_rptr(wwp))
  {
  if (wsp->evnt & PT_ZZZZ) { Menu_Button_Text(DefaultColourSet(),wwp,"PE in C test : Sleeping"); }
  }

  exit(0);
}
```

Notice the test added in the while loop. It's here the program will handle the Sleep action. Of course, I'm cheating a little because I have the right routine in libxmenu. So I used it.

And to make this story short, you can find a complete tutorial for PE with C68 in the C68 distribution. Maybe, in another article I will explore shortcut provided by the libXmenu, but that's another story.

Q60 - a review

Wolfgang Lenerz

Some time ago, I acquired a Q60. I had bugged Peter Graf for quite some time on the mailing list, until he relented and sold me a Q60 which he had built himself. Note that this was before an agreement was made with D&D, who, today, build and sell the Q60.

1 - What you get

When the package arrived, I was, of course totally excited. The contents were promising: First of all, you get a box with the Q60 board in it.

a) The Q60 board

The board doesn't seem very different from a Q40 board that has already be seen in these pages quite a few times. The board contains 2 ISA slots, the 68060 running normally at 60 Mhz, some glue chips (including the video chips) and memory slots.

Normally, you can fit up to 32 MB of EDO memory (the Q40 also permits the use of FPM memory, the Q60 only allows EDO memory). However, a "special hardware option" for more memory exists, and it so happens that mine contains that option. The board is thus populated with 80 MB (one 16 MB memory card, one 64 MB memory card), which is quite sufficient.

For the time being, SMSQ/E can only use 32 MB out of the 80 on board, but I hope that, what with the exciting announcement as to the status of the SMSE/E source code, this limitation can be overcome

sometime in the future. We'll see!

Also included in the package is an I/O card. The I/O card contains the serial (2) and parallel ports for the Q60, the floppy and IDE harddisk interfaces, as well as a joystick port. It fits into one of the ISA extensions slots. Thus, one extension slot remains free - I know that some people, who use the Q60 under Linux, use this for an Ethernet Card. Of course, Ethernet drivers under SMSQ/E are not available (yet?).

The Q60 board also includes sound ports for 10 and 20 kHz sampled sound, and an AT style keyboard interface. There are also two ROMs on board, which contain the operating system SMSQ/E.

The package is accompanied by a thick A4 documentation and several disks. Normally, you would also get Linux for the Q60, but as I told Peter Graf that I wouldn't be using Linux, it wasn't included in my package.

b) The documentation

The documentation I got consists of:

- a Q40 and Q60 mainboard users manual, telling you what is on the board and how to configure the hardware. This manual also shows the Q60 memory map.
- a Q40 and Q60 mainboard Hardware Documentation. this contains detailed information about the I/O ports used, and generally about the hardware interfaces in the machine. This will not be useful to a normal user, but can be used by those who wish to program close to the machine.
- an SMSQ/E manual, telling you about the new features of this operating system.
- a Q60/Q40 specific SMSQ/E manual.
- a documentation of the new colour drivers.

All in all, this is a very comprehensive documentation.

c) The disks

You also get several disks with the machine. These have very explicit instructions on them on how to get several versions of SMSQ/E (with/without high colour drivers etc) running on your machine, and also how to partition your hard disk.

It would be too long to go into all of the software that is fitted onto the disks, there is something for everybody (how to use the onboard sound, for example).

A comprehensive index of the software on the disks is provided. The first of the three "support disks" has a boot file on it, so that you can autostart from there and let yourself be guided by a menu. All very professional.

2 - Installation

Installing the Q60 was straightforward. All you need is a PC case, with an AT (preferably not ATX) power supply. There will be no problems with power supply connectors, because the Q60 doesn't use the normal power connector - it uses on the the hard disk power connectors - pretty neat!
You bolt the Q60 into the PC case - holes cut out in the mainboard fir over holes in the case.

You install the floppy and hard disks, insert the I/O card and that's about it, really.

3 - Problems

Of course, for me, that wasn't quite it, as had a few problems with my Q60 - but read on.

First of all, a Q60 really needs a hard disk. You can use it with floppies only, but why bother? Of course, since we're talking SMSQ/E here, the harddisk needn't be very large. It so happens that I had an old harddisk lying around, which, quite some time ago I had taken out of a PC, for reasons I couldn't remember.

I installed it in the case, connected it to the I/O card, booted with a floppy and started to partition and format the disk. This all went on without a hitch.

I copied some files over to the hard disk. That, again, went without a hitch. I shut down the machine. When I came back to it a few days later - there was nothing on the hard disk. Hmmm?

I restarted everything, and everything was fine, but again, a few days later, there seemed to be nothing on the harddisk. I made some tests, and found out that everything disappeared from the disk as soon as the machine was switched off and, when switching on, I used my normal boot file. Very mysterious. I tried to find out what, in my boot file, caused the problem.

That took me quite some time (weeks!) - and I didn't find out what the problem was. I was about to protest quite forcefully to Peter Graf, when I suddenly remembered that I had taken the harddisk out of the PC because it didn't work correctly in the PC anymore.

QBOX-USA BBS

Operating since 1993 on a Sinclair QL from Utica, Michigan, USA
Supporting *ALL* Sinclair and Timex users
Message and File Areas for QL, Z88, Spectrum, TS2068, ZX81, TS1000
Modem speeds 300 bps to 33.6k bps supported
24 hour operation - call anytime

810-254-9878

Our Lips are Sealed

QL-THESAURUS
STYLE-CHECK

£10 or €15 each

QL-2-PC TRANSFER
QL-RHYMES

Geoff Wicks, 28 Ravensdale, Basildon, Essex, SS16 5HU, UK.
Tel: +44 (0)1268 281 826 Email: geoffwicks@hotmail.com
Web: http://members.tripod.co.uk/geoffwicks/justwords.htm

Just Words! - Software for Writers and Word Lovers.

I installed another old hard disk that I still had around here - and that has worked normally ever since... I threw the faulty hard disk away, of course.

```
Q60 1 : Wolfgang 0
```

I then also proceeded to install a CDROM drive. Do I have to tell you about the old CDROM drive I had and that (I LATER remembered) didn't work correctly?

```
Q60 2 : Wolfgang 0
```

By that time, I had also noticed that the keyboard adapter I used, to connect a PS/2 style keyboard (instead of an AT style keyboard) wasn't working correctly, which caused some dropped keys when typing. Installation of a very cheap old AT keyboard solved that problem, too.

```
Q60 3 : Wolfgang 0
```

I WAS able to connect an old monitor without any problem, though!

4 - In use

I do admit that I haven't used the Q60 extensively yet. There is one problem I noticed: the QPAC2 jobs menu (and QPAC 1 Sysmon) crash the machine when they try to draw the sprite showing how much memory is left. When I showed this to Roy Wood during the Eindhoven show, he was quite stumped, because that doesn't happen on his machine. I'll investigate this further - I've already isolated the subroutine that does that, and I'll try to find out what is happening.

Apart from that, you get a pretty fast machine! Everything works as it is supposed to. Screenwise, the machine has the normal QL modes (512x256 in 4 colours, 256x256 in 8 colours) and also high colour modes: 512x256 or 1024x512 in 64K colours (16 bit colours).

One of the reasons I haven't used this machine extensively yet is that I hadn't copied all of my usual software to the machine. I have been preaching now for ages about how SMSQ/E gives us the same operating system and programming environmment in many machines (which is why I use it). However, that also supposes that you get all of your programs etc across to the new machine. This is far from easy, considering that I have a 70 MB disk on my main QPC machines, of which "only" 11 MB are free today. How do you get that much data across? Copying it on floppies is not really feasible.

To the rescue came, at first, Thiery Godefroy and Jonathan Hudson. Thierry Godefroy wrote a CDROM driver for the Q40. This is stil nominally at a beta stage.

Jonathan Hudson wrote a program allowing you to read a QXL.WIN file from within another operating system. I then copied my QXL.WIN file to a CD. This, however, involved writing to the CD in a special manner (burning the QXL.WIN file as an ISO image file, thus putting the QXL.WIN "disk" on the first sectors of the CD), which I am unable to do with my normal burning software. I was able to use a trial version of another CD writing software and got it all working. I could actually copy files from the CD to my hard disk.

However, operations were extremely slow (after 24 hours it sill was copying). This proved at least that the Q60, the CDROM driver and the software were able to run for 24 hours in an unattended fashion.

I also noticed that Jonathan Hudson's software does not set the file dates to the dates I wanted (i.e. the date of the file it was copying from). All in all, the special burn operation, the slowness and the file dates meant that this was not a viable solution for me.

So, in a few spare moments, I wrote another software that also uses Thierry Godefroy's drivers , but allows you to read the QXL.WIN file from the CDROM even if it is not burned as an ISO image file, provided it is burned somewhere on the CDROM in one single contiguous file, starting at the head of a 2048 bytes sector - which is normally the case for all files.

With that, I was able to "backup" my files from the CD ROM to my hard disk. I didn't really time the operation - but when I cameback about 25 minutes later, everything was copied...

During the Eindhoven show, when I showed this (still provisional) software to Roy Wood, I noticed a few bugs, which are now ironed out. So now I can use my Q60 in earnest.
And it flies...

[Editor's comment: Sysmon never showed the problem on my Q40 either ... why not compare the binary and see if that is faulty. And for file transfer: I happily used SERNET to update/backup files between the TT, QPC, Q40. No problems here ... and it takes "only" a few hours for 250MB! - definitely less than 24 hours for 70MB]

Independent QL Users Group

Worldwide Membership is by subscription
only, and offers the following benefits:
Monthly Newsletter - up to 40 pages
Massive Software Library - All Free !
Free Helpline and Workshops
Regional Sub-Groups. One near you?
Advice on Software and Hardware problems
Subscription just £14 for UK members
Overseas subscription £17

Barclaycard: Visa: Access: Mastercard

Now in our Nineteenth Year

Further details from the Membership Secretary

Bill Newell, 213, Manor Road
Benfleet, Essex, SS7 4JD
Tel. +44(0)1268 754407
or
Visit the Quanta Web Site
http://www.quanta.uni.cc
email: quanta_membership@uk2.net

We're moving again

Marcel Kilgus

Quite a lot of things have happened in the QL world during the last few months. It all started one evening in a pub: after the Hove show in early March the usual suspects went to dinner together, followed by a visit in a nearby pub. While drinking beer (or wine in Roy's case) we discussed the future of our beloved system. The main problem is clearly the lack of development lately, especially from Tony Tebby's side, and in the end the conclusion was that we need to take action into our hands. As I was the only one who had all the necessary sources I eventually volunteered to have a look into some issues. The most urgent one was to implement access to the colour drivers into WMAN, because although the drivers are out now for 1 1/2 years not many applications use them as they are not accessible through the window manager.

So I had a look at the data structures the window manager uses and discovered that the creators were wise enough to allocate 2 bytes for every location where a colour is defined. This leaves a bit of space for expansions. I finally came up with the following scheme which I also posted into the ql-users mailing list for discussion:

Binary representation	Meaning
%00000000cccccccc	exactly like before
%00000001pppppppp	index into the standard 256 colour palette
%00000010ssssssss	index into a "system palette", see below
%00000011gggggggg	grey scale value
%1rrrrrgggggbbbbb	15bit RGB colour definition

The "system palette" is an invention found in other systems and defines a standard appearance of the different applications. This means that it includes the standard colour used for the title bar, for a button, for the window background etc, you name it. The grey scale definition is a bit superfluous because those colours can also be specified through the RGB definition, but it sounds like an elegant option to me nonetheless (and it's not really much work to implement).

And well, to make a long story short, a first version of the mentioned changes is already running on my system. I have however only patched one application (using a hex editor) to actually use the new definition. A before/after screenshot of this can be found at

http://www.kilgus.net/images/new-wman.png.

The second thing I addressed was the background colour. Currently it works by creating a window that is as big as the screen, fill it with the background and include it into the system in a way that it is unpickable and really just behaves like the background. The advantage of this method is that it is very quick to implement, the disadvantage is that a simple background colour can easily use up 1 or 2MB of system memory! So I'm currently experimenting with a version that uses another approach, it draws the background colour directly when necessary and doesn't rely on any background window (a background image is still handled as before as this needs to be somewhere in memory anyway).

OK, this saves some megabyte of RAM, but the applications themselves can still take up quite a lot of space so that much memory is needed. This is not per se a problem on systems like QPC where memory is dirt cheap, but with much memory disc drives accesses gets significantly slower because of the dreaded slave block issue. I had a look at that, too, and it looks to me that the whole slaving code is incorporated into the system like cancer: bits and pieces everywhere.

So the only solution I found so far is from the Atari version and is called "fast memory". I don't know exactly the history of it but the bottom line is that Atari's can have a separate block of memory which is, as the name suggests, obviously faster than the normal system memory but on the other hand can't be directly used for DMA accesses (like reads and writes from/to hard discs) and therefore is unsuitable for slaving. What essentially is done is that the whole SMSQ/E memory map is squeezed into the normal system memory and only the TPA (transient program area) is transferred to the fast memory block. This way slave blocks stay limited to the "common heap" which remains in the slow memory, the memory allocation calls however first return space in the TPA unless this is full, only then a block in the slower common heap is returned.

In an experimental QPC I now fake this behaviour in a way that the first megabyte of RAM is used as the traditional "slow" memory and all the rest as "fast" memory. This way the slave blocks are limited to the first MB of RAM. The drawback is that most utilities (including the FREE_MEM SBASIC function) now only tell how much free space is left in the "slow" memory block, i.e. they only return e.g. 700kb of free RAM while in reality there's another 60MB or something waiting in the "fast" block.

So, that's how much I was able to do within roughly two weeks. Directly afterwards university demanded its time again and I had to stop playing

TF Services

Compswitch

A **UK** 4-way trailing socket designed to switch off computer peripherals automatically when the computer is switched off, or (in the case of an ATX computer) when it auto-powers down. *Compswitch* has one control socket, and three switched sockets.

Cost..... £24

**************NEW***************

superHermes

A major hardware upgrade for the QL

All Hermes features (working ser1/2 at 19200, independent baud rates/de-bounced keyboard/ keyclick) IBM AT kbd I/f // HIGH SPEED RS232 at 57600// serial mouse port and 2 other RS232 inputs// 3 I/O lines // EEPROM

Cost (including manual/software)**£90** (£92/£93)
IBM AT UK layout Keyboard.....**£11** (£13/£15)
Serial mouse .....**£8** (£8.50/£9)
Capslock/scrollock LED .....**£1** (£1.50/£1.50)
Keyboard or mouse lead .....**£3** (£3.50/£3.50)
High speed serial (ser3) lead .....**£4** (£4.50/£4.50)

Hermes available for £25 (£26/£27) **Working ser1/2 and independent input, debounced keyboard.**

SuperHermes LITE: All Hermes features (see above) + an IBM AT keyboard interface only.
Cost (incl keyboard lead) .....**£53** (£54/£55)

QL REPAIRS (UK only)

Fixed price for unmodified QLs, excl microdrives. QLs tested with Thorn-EMI rig and ROM software.

£27 incl 6 month guarantee

Minerva

The ORIGINAL system operating system upgrade

OTHER FEATURES COMMON TO ALL VERSIONS

DEBUGGED operating system/ autoboot on reset of power failure/ Multiple Basic/ faster scheduler- graphics (within 10% of lightning) - string handling/ WHEN ERROR/ 2nd screen/ TRACE/ non-English keyboard drivers/ "warm" fast reset. V1.97 with split OUTPUT baud rates (+ Hermes) & built in Multibasic.

First upgrade free. Otherwise send £3 (+£5 for manual if requd). Send disk plus SAE or two IRCs

MKI...£40 (£41/£43) **MKII...£65** (£66/£67)

MINERVA RTC (MKII) + battery for 256 bytes ram. CRASHPROOF clock & I²C bus for interfacing. Can autoboot from battery backed ram. Quick start-up.

QL RomDisq

Up to 8 mbyte of flash memory for the QL

A small plug in circuit for the QL's ROM port (or Aurora) giving 2, 4 or 8 mbytes of permanent storage - it can be thought of as a portable hard disk on a card, and reads at some 2 mbytes per second.

Think of it - you could fully boot an expanded QL, including all drivers/SMSQ etc off **RomDisq** at hard disk speed with only a memory expansion needed.

2 mbytes RomDisq.....**£39** (£40/£41)
4mbytes RomDisq.....**£65**(£66/£67)
8 mbytes RomDisq.....**£98** (£99/£100)
Aurora adaptor.....**£3** (£3.50/£4)

MPLANE

A low profile powered backplane with ROM port

A three expansion backplane with ROM port included for RomDisq etc. Aurora can be fitted in notebook case and powered off single 5V rail - contact QBranch for details. Two boards (eg Aurora and Gold Card/Super Gold Card/ Goldfire fixed to base. Suitable for Aurora (ROM accessible from outside) & QL motherboard in tower case. Specify ROM facing IN towards boards, or OUT towards back of case.

Cost ..... £34 (£35/£36)

I2C INTERFACES

Connects to Minerva MKII and any Philips I²C bus

Power Driver Interface 16 I/O lines with 12 of these used to control 8 current carrying outputs (source and sink capable)
2 amp (for 8 relays, small motors) ..... £40 (£43/£44)
4 amp total (for motors etc) ..... **£45** (£48/£50)
Relays (8 3a 12v 2-way mains relays (needs 2a power driver).....**£25** (£28/£29)
Parallel Interface Gives 16 input/output lines. Can be used wherever logic signals are required.....**£25** (£27/£28)
Analogue Interface Gives eight 8 bit analogue to digital inputs (ADC) and two 8 bit digital to analogue outputs (DAC). Used for temp measurements, sound sampling (to 5 KHz), x/y plotting .....**£30** (£31/£32)
Temp probe (-40°C to +125°C).....**£10** (£10.50/£11)
Connector for four temp probes.....**£10** (£10.50/£11)
Data sheets.....**£2** (£2.50/£3)
Control software & manual (for all I/F).....**£2** (£2.50/£3)

QL SPARES

Keyboard membrane .....**no longer on sale**
1377 PAL .....**£3** (£3.50/£4)
Circuit diagrams .....**£3** (£3.50/£4)
68008 cpu or 8049 IPC.....**£8** (£8.50/£9)
8301/8302 or JM ROM or serial lead.....**£10** (£10.50/£11)
Power supply (sea mail overseas).....**£12** (£17/£21)

Prices include postage and packing (Airmail where applicable). Prices are: UK (Europe /Rest of world). Payment by cheque drawn on bank with UK address/ postal order or CASH! I can no longer accept card payments as UK only does PDQ transaction. SAE or IRC for full list and details

10 May 01

29 Longfield Road, TRING, Herts, HP23 4DG
Tel: 01442-828254 Fax/BBS: 01442-828255
tony@firshman.demon.co.uk http://www.firshman.demon.co.uk

around with all the nice new features.
In the meantime another, independent development began: Wolfgang Lenerz had a chat with Tony Tebby and Tony obviously agreed to release the SMSQ/E sources into the public. The details of it will be discussed at the Eindhoven meeting to which I'm travelling by train right now while writing these lines. More details on that will certainly be in another article in this issue.
On another issue, a little bit before that announcement people on the mailing list asked during the discussion of the new high colour window manager whether I could implement the new colour drivers for the Aurora card. I at least promised to have a look into the issue. Of course with SMSQ/E becoming open source anybody else could do them, too (and I would be glad if somebody volunteered) but it's not exactly easy and so I fear it might still be me who has to do it in the end. But before even considering this I would like to know how many people still use an Aurora card and want to have the colour drivers for their system (and are willing to pay an upgrade fee for it). Please give some feedback to **marcel@kilgus.net** If I get no or not much feedback I probably won't invest any time into it, so if you want it, tell me! (if you don't have email access tell it to somebody who has, your local QL dealer for example ;-)
I think after all the conclusion is that the QL world is finally moving again. I will certainly develop a few things like the ones mentioned above and some others have already said to look into other features once the sources of SMSQ/E are available. Stay tuned for more news in the next QL Today issues.

SMSQ/E Source Code to be made available

Wolfgang Lenerz

For those of you that don't read the mailing list, some important news: The source code for SMSQ/E will be made available to anybody who requests it.

Indeed, during the second half of March, Tony TEBBY was approached to see whether he would agree to make his source code more widely available. This way, there might be a way out of the dead-end OS development has been in for the last months, it becoming obvious that Tony, failing sufficient funds, would not be able to continue development.
Since other people (Marcel Kilgus comes to mind) do want to continue to develop SMSQ/E, to be able to incorporate new features and/or correct what may be perceived as bugs, it would be a good idea if the source code was made more open.
Tony then agreed to this in principle, provided a way was found to have something coherent.

The desire of having coherent versions of SMSQ/E was also expressed by all of those I personally contacted. This, however, implies some degree of control over what is finally done with the code.

Since a meeting in Eindhoven was scheduled for the 23rd of March anyway, it was thought that this was a good time to discuss all of this.
Following the discussions at Eindhoven, here is what has been agreed upon, Tony TEBBY also having agreed to it:

In short:
Whilst Tony Tebby will retain copyright over the code, anyone may have a copy of the source code, modify it and give it away for free.

However, there will also be an official version of SMSQ/E that will be maintained by a registrar and be sold by 2 people, namely Roy Wood and Jochen Merz. Support for this official version will be part of the selling price. The purpose for the official version is to make sure, as much as possible, that any change to SMSQ/E for one machine (e.g. Q60 or QPC) will percolate down to all other machines (e.g. QPC, Q40, QXL etc...) as fast as possible, in an attempt to make sure that we have one single version with the same features (hardware permitting) for all machines. Any change made by anybody may be proposed to the registrar for inclusion in the official version.

The above is the essence of what was agreed upon, a more detailed version is, however necessary, as some legalities have to creep in. This was made clear in an "official statement", as follows:

Official statement

1. Tony TEBBY retains copyright of SMSQ/E as it stands now.

2. SMSQ/E will be made available, as source code, to any person who so requests it. The

request must be made to the "registrar", i.e. me. The source code will be sent via CD ROM, thus the request must be accompanied by 3 IRCs, else it will be ignored.
The SMSQ/E that will be so made available is the SMSQ/E as it stands NOW. Any future additions/changes may, or may not, be excluded from this, since the authors of such additions/changes may state whether they want their source code to be included in the official distribution, or not.

3. No distribution of SMSQ/E may be SOLD, except for the official distribution. This interdiction includes that of including and distributing SMSQ/E in Public Domain Libraries. Official distributions will be sold in compiled form, possibly together with the official distribution as source code. For such sales, for the time being, two distributors, namely Jochen Merz (JMS) and Roy Wood (QBRANCH) have been appointed by the copyright holder.

4. The registrar, will maintain official distributions of SMSQ/E, one for each machine on which SMSQ/E may run.

5. Any person may make any change to the source code he feels like. Any person may give away to others the modificaton he thus made, including the official distribution in source code form only, provided this is made ENTIRELY FOR FREE - no charges, not even copying charges, or charges for the media on which this is distributed, may be levied!

6. Any such change may be proposed to the registrar for inclusion in the official distributions of SMSQ/E.

When making such a proposal for inclusion, the author of the addition/modificaton may state whether the inclusion:
- is to be made only in the compiled form of the official distribution;
- is to be made alongside, but not included in, the official distribution.

Failing such a statement, the inclusion will be contained in the compiled and the source code versions. The author then agrees to the limitations as set out above.
Authors retain copyright over their additions/modifications, but when submitting their additions/modifications, they agree that, if they are accepted in any official distribution (under the statements as set out above), the may be included in all other future distributions (in other words, you can't submit something, which is included, and then some months later attempt to withdraw it). Their contribution is subject to the same licence as the rest.

7. A styleguide will be maintained by the registrar, to which any addition must adhere. The styleguide will be part of the official distribution

End of official statement.

The above text is what is hoped to be a finely tuned compromise between those who want only a totally open source, and those who want to be able to retain full control over their code. It is not easy to reconcile these two positions, I hope that this is a reasonable compromise.

When submitting the above statement to the mailing list, I added some personal comments:

A - Some passages of the above, mainly those which result in a limited distribution of SMSQ/E may look pretty harsh to some of you, especially the proponents of totally open software.
However, I consider that there are a few people (like JMS and Qbranch) who are the glue that hold the QL world still together. If they have absolutely no financial incentive to continue, they probably won't. In my opinion, the effect on the QL World could be disastrous.
There are also some other people, like Marcel Kilgus, who have put an enormous effort into SMSQ/E, and would like their efforts to be retibuted in some way. Others, such as Peter Graf, have invested much of their time and money to design hardware which is still being built and sold - if no coherent verson of SMSQ/E exists, then the effect on sales could also be disastrous.

The above all implies that some incentive exists for people to
a) maintain an offical registration
b) pour more time into developments beneficial to all versions of SMSQ/E
c) BUY the official distribution, to have something coherent and supported. This incentive can only result, in such a small world as ours, from some restriction on the copyright.
I HOPE you can agree with this.
I KNOW some of you will not.
I HAVE donned my flameproof vest...

B - I have been appointed as the registrar (more by default than anything else). I will try to fullfil that role as well as possible. My main aim is to make sure that we have coherent versions for all machines. There will always be "locomotives", i.e.

people doing something new for one version of SMSQ/E, which will then also be applied, hardware permitting, to other versions.

However, I can not do that work (alone). I NEED the help of some of you (who will be "key developers" for one machine) so that they can implement the necessary changes (if any) for each specific machine.

Thus I make a PLEA for volunteers. Obviously, for SMSQ/E running on QPC, Marcel Kilgus will be the key developer. For SMSQ/E on Q60/Q40, the obvious persons would be Claus and Peter Graf (yes, I know, I'm trying to twist your arms here, Claus and Peter :-) and perhaps also Jerome Grimbert (?)).
What about the other machines? Anybody out there interested:
QXL (Thierry Godefroy?) Atari? Aurora? SuperGoldCard?

C - I will always welcome (with WIDE OPEN arms, believe me) any modification already coded by anyone for inclusion. I must, however, retain the right to reject any code, if, for some reason, this would be unsuitable. However, I will certainly not reject anything, unless for pretty strong reasons (most probably becuse this doesn't comply with the styleguide). (Actually, I probably will never reject anything, because I don't believe that I will get so many things to be inluded....)

As you noticed, there will be a styleguide. The purpose of the styleguide is to make sure that we have coherent source code. There is nothing worse, when trying to understand other people's code, than having to go through code that is written in very different forms. Since, at the time of writing, ALL of the code complies with one style (i.e. Tony Tebby's style), we would really like any new code to comply with that!

D - I can already sympathize with people who don't want their additions to be part of the official distribution, since they would agree to a limitation of their own copyright. I shall try to set up a scheme whereby these additions can be distributed (in form of modules, or smply code to be LRESPR'D) alongside the official distribution.

E - There will always be a lag of time between one feature coming out on one version of SMSQ/E and then being ported to the other versions. I shall strive to keep this lag as small as possible, but I feel that it is not such a good idea to penalise the one version having the new feature by waiting for all of the other versions to have it.

F - Time (or lack of it). It will be a few months before the entire code will be given to me, digested and recompiled etc. Please be patient. Address your requests for new features to me. I will attempt to discuss everything with the key developers to see what can be implemented.

G - Is anyone interested in doing a nice documentation package? So many people out there have protested about no documentation being available. NOW is your chance to make a contribution.

Please people, consider the above very carefully. Don't reject it out of hand - let's try to unify our resources to move forward!

QI Forever - now more than ever!

Clocking On (Part 2)

David Denham

In the second part of this series we'll look at some useful little bits of SuperBASIC to handle time and dates on the QL. None of this will be too difficult, it should be easy enough for those who consider themselves "beginners" when it comes to BASIC programming!

The first and shortest listing is shown in Figure 1. Just call it with the year number as a parameter and it will return 1 if that year is a leap year, or 0 if not. Years are leap years if the year number is divisible by 4, unless it's the turn of a century (e.g. 1896 was a leap year, but 1900 was not). However, the turn of a century may be a leap year if the year number is divisible by 400 (i.e. every 4th turn of a century is a leap year - 2000 was a leap year for example). This is summarised by the code in line 3030, which is a rather fearsome looking line of BASIC but works well enough.

```
3000 DEFine FuNction LEAP_YEAR (year)
3010   LOCal leap
3020   leap = 0
3030   IF (year MOD 4) = 0 AND NOT (((year MOD
       100) = 0) AND ((year MOD 400)  > 0))
       THEN leap = 1
3040   RETurn leap
3050 END DEFine LEAP_YEAR
```

Figure 1: Function to determine if a leap year or not

The powerful Sinclair QL successor

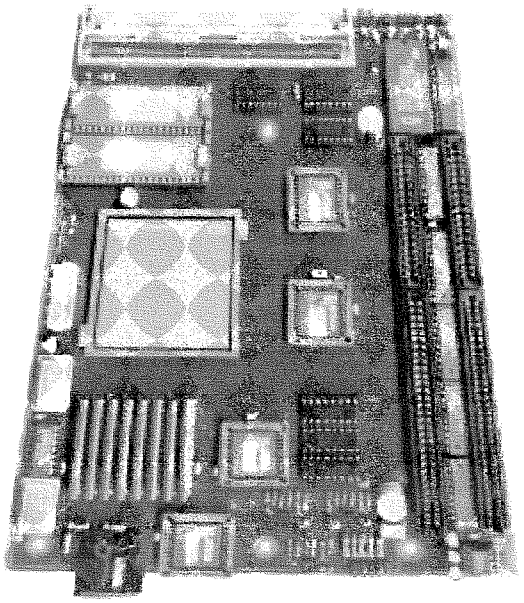
Q60

Q40

Have you ever dreamt of QLs that are more than 100 times faster, have many thousands of colours, high resolution graphics, stereo sound, fast harddisks and modern peripheral capabilities? New complete computers that run your QL software and open the door to unreached 68060 speed and advanced applications?

Here they are!

- Q40i : 68040 CPU, 40 MHz, Math. Coprocessor, MMU
- Q60/66: 68060 CPU, 66 MHz, Math. Coprocessor, MMU
- Q60/80: 68LC060 CPU, 80 MHz, MMU
- 68060 superscalar architecture, dual execution units
- Up to 160 BogoMIPS performance for QDOS+SMSQ/E
- 4 to 128 MB RAM, PS/2 module sockets
- 256 to 1024 kB ROM
- Highspeed 32 bit graphics, with original QL modes
- 65536 colours at 1024 x 512 pixel resolution
- Multisync monitor output
- PC Keyboard interface (DIN)
- 20 kHz Stereo sound
- Battery buffered clock, 2 KB nonvolatile RAM
- Controller for 2 IDE harddisks or CD-ROM
- 2 Serial ports with 115200 Baud, Parallel port, Joystick port (on IO card supplied with mainboard)
- Hardware extension slot supports ISA cards
- Fits directly into Minitower or other standard case
- +5V / +12V power supply
- No tinkering, no parts from original QL needed
- Mainboard size 8.2 x 6.3 inch



The Q40i and Q60 give you the choice of three different operating systems:

- **SMSQ/E** - The QDOS compatible, but faster and more modern operating system.
  The first choice for most Q40 and Q60 users. Allows you to run the majority of QL programs, has a much improved BASIC. SMSQ/E supports a lot of the advanced Q40 and Q60 hardware capabilities, including full **highcolor graphic drivers** and sampled sound !
- **QDOS Classic** - A multitasking operating system with good compatibility for older QL programs.
  Includes harddisk and sound support. It was the first operating system for the Q40. Full 68060 support.
- **68k Linux** - The free Unix-like multiuser / multisession operating system.
  The Q40 and Q60 are the first and only QL style computers that run Linux. Linux on the Q40 and Q60 offers you an endless amount of application software, including X Window System, full Internet access, graphical Webbrowser, CD-ROM writing, MP3 player.
  There is a special **Q60 Linux distribution** with graphical installation tool on CD-ROM.

The Q40i and Q60 are offered as mainboards or cased systems by:

D & D Systems, P.O. Box 5813, Ripley, Derbyshire, England DE5 9ZR
Tel: +44 (0)1773-740170, FAX: +44 (0)1773-748399, Email: sales@q40.de

More information about the Q40i and Q60 at the official Website: http://www.q40.de, Email: info@q40.de

The calendar we use these days was originally invented by a Pope Gregory (the Gregorian Calendar). It was created to run from 15/10/1582, although it only came into use in Britain in 1752. The calendar is obviously based on a 365 day year with the occasional 366 day year to make up for the fact that a solar year (time for Earth to go round the Sun) is about 365 days plus 5 hours, 48 minutes and nearly 46 seconds, about 365 and a quarter days, hence the addition of an extra day every four years and the adjustments at the turn of each century. This calendar is so accurate in fact that only one day's error is accrued every 3320 years. The Gregorian calendar runs from 1582, so the error will not amount to a full day until about the year 4902!

We won't be around by then to worry about it of course, the QL or its derivatives may be (Q60 may have become Q60E6 by then of course!) Actually, the QL clock will end its useful life sometime in the next century, the actual time being determined by whether your QDOS or SMSQ system uses signed long word values for its time counter or not (see Mark Knight's articles in earlier QL Todays for more on this subject!).

Once armed with enough facts on how the theory of calendars and how the QL handles times and dates we can start to write some more interesting little routines. For example, how far into a year are we - how many days have elapsed so far this year? Figure 2 to the rescue!

PRINT DAYS_SO_FAR(2002,3,31) should print 90, being made up of 31 days in January, 28 days in February and the 31 days of March. If you had used the year 2004 instead, it would have added 1 for February, giving a result of 91. This routine gives the number of days elapsed since 1st January. To calculate from any other time of the year e.g. if your tax year starts on 6th April and you want to find out how far into the tax year you are by 6th July:

```
REMark first calculate days to just before start
date
LET time1 = DAYS_SO_FAR(2002,4,5)
REMark now calculate difference between dates
PRINT DAYS_SO_FAR(2002,7,6) - time1
```

```
2000 DEFine FuNction DAYS_SO_FAR (yr,mth,dy)
2010   LOCal total
2020   total = 0
2030   SELect ON mth
2040     =2  : total = 31
2050     =3  : total = 59
2060     =4  : total = 90
2070     =5  : total = 120
2080     =6  : total = 151
2090     =7  : total = 181
2100     =8  : total = 212
2110     =9  : total = 243
2120     =10 : total = 273
2130     =11 : total = 304
2140     =12 : total = 334
2150   END SELect
2160   IF mth› 2 THEN total=total+LEAP_YEAR(yr)
2170   total = total + dy
2180   RETurn total
2190 END DEFine DAYS_SO_FAR
```

Figure 2 Function to calculate number of days elapsed by this date (needs the LEAP_YEAR function from Figure 3)

It can sometimes be useful to set up an array with a list of days in each month, to help with various time-related calculations. Figure 3 shows an example, which holds the data for a 365 day year. The program then calls the LEAP_YEAR function to check if a 29th day needs to be added for February or not.

So simply enter the command SETUP_MONTHS 2000 to set up an array called monthdays containing the number of days in each month for the year 2000.

```
3000 DEFine FuNction LEAP_YEAR (year)
3010   LOCal leap
3020   leap = 0
3030   IF (year MOD 4) = 0 AND NOT (((year MOD 100)
       = 0) AND ((year MOD 400) › 0)) THEN leap = 1
3040   RETurn leap
3050 END DEFine LEAP_YEAR
3060 :
4000 DEFine PROCedure SETUP_MONTHS (year_no)
4010   LOCal a
4020   DIM monthdays(12) :REMark ignore subscript 0
4030   RESTORE
4040   DATA 31,28,31,30,31,30,31,31,30,31,30,31
4050   FOR a = 1 TO 12 : READ monthdays(a)
4060   IF LEAP_YEAR(year_no) THEN monthdays(2) = 29
4070 END DEFine SETUP_MONTHS
```

Figure 3: Setup an array to hold number of days in each month

Although routines like this will give us the basic information to do such calculations, we may from time to time need to know what day is associated with each date. The QL provides a function called DAY$ to tell us the current day, and by temporarily setting the QL clock to the date concerned we could extract the name of the day as a three letter word (Sun, Mon, Tue, Wed, Thu, Fri, Sat) like that. Alternatively, we can set up an array with the full name of the seven days:

```
dayname$(1) = "Sunday"
dayname$(2) = "Monday" and so on.
```

Another calculation which can be a bit daunting is handling differences in times. Take an employee clock-in system, for example, where the system gives you the time the employee clocked in and clocked out, you need to work out how many hours the employee worked.

```
IN  : 09.30
OUT : 17.30
```

Obviously, this one is trivial - the time would be 8 hours and could be calculated simply by subtracting 9 from 17. The easiest way to handle such calculations is by converting the time to minutes and doing the calculations with minutes rather than struggling with fractions of hours.

```
intime = 9*60+30
outtime = 17*60+30

1050-570=480
480/60=8
```

Obviously, using the 24 hour clock system is much easier when handling time calculations since it prevents you having to try to work out if 6.00 is 6AM or 6PM for example (that's usually obvious - if the end time is "less" than the start time, the start time must be AM and the end time PM, so add 12 to the number of hours!)

```
5000 DEFine FuNction TIME_DIFFERENCE
       (time1$,time2$)
5010   LOCal a
5020   REMark returns the difference in minutes
       between the two time
5030   REMark strings, equivalent to time2$-time1$
       or "1700"-"0900"
5040   t1 = 60*time1$(1 TO 2)+time1$(3 TO 4)
5050   t2 = 60*time2$(1 TO 2)+time2$(3 TO 4)
5060   RETurn t2-t1
5070 END DEFine TIME_DIFFERENCE
5080 :
5090 DEFine FuNction HOURS(mins)
5100   RETurn mins DIV 60
5110 END DEFine HOURS
5120 :
5130 DEFine FuNction MINUTES(mins)
5140   RETurn mins MOD 60
5150 END DEFine MINUTES
```

Figure 4 Calculate differences in times

The TIME_DIFFERENCE function in Figure 4's listing takes two strings denoting 24 hour clock times and converts them to minutes, then subtracts one from the other and returns the difference in minutes. If you wish to reduce that difference in minutes to hours and minutes, use the two functions HOURS and MINUTES to reduce the total number of minutes back down to hours and minutes by using DIV 60 and MOD 60 respectively.

If we are taking time and date information from the string returned by DATE$ it is a simple matter to slice the string to extract the relevant numeric parts, with the exception of the month number, since this is returned as a string with the first 3 letters of the name of the month in whatever language the operating system is programmed it display:

```
LET temp$ = DATE$

2002 Jan 27 11:06:23
```

We can split the time and date up as follows, apart from the month:

```
year_number = temp$( 1 TO  4)
month$      = temp$( 6 TO  8)
day_number  = temp$(10 TO 11)
hour_number = temp$(13 TO 14)
min_number  = temp$(16 TO 17)
sec_number  = temp$(19 TO 20)
```

One way of converting month$ to a number from 1 to 12 would be a list of IF.THEN statements:

```
IF month$ = "Jan" THEN LET month% = 1
```

If your operating system supports string select statements you could use:

```
SELect ON month$
  ="Jan":month%=1
  ="Feb":month%=2
  ="Mar":month%=3
  ="Apr":month%=4
and so on
END SELect
```

In fact, here's a way of doing it all in one line, using INSTR:

```
month% = ((month$ INSTR
 "JanFebMarAprMayJunJulAugSepOctNovDec")
DIV 3)+1
```

OK, time for some light relief to digest and use the above information. Trekkies, read on. We are going to produce a program which will give you a 'Star Date' clock for your QL. Then with a bit of luck the QL might make a guest appearance on Star Trek some day...the QL won't just take over all earth computing as we know it but take a big step beyond the final frontier.

Let me explain myself before you think I've gone mad!

If you watch Star Trek you'll probably know about Star Dates. You may have seen Captains Kirk, Picard, Sisco and Janeway quote figure like 40123.4 and wondered whether they were random values or whether there was some theory behind them. The answer is a bit of yes and a bit no.

The Star Dates quotes in the original Star Trek series are not based on the same information and statistics as the other series. All series seem to use 1000 stardate units for each earth year, with one unit equivalent to one day, meaning that only 365 or 366 units are used of every year (in case an over-zealous phaser blast knocks earth out of orbit and makes the year longer no doubt).

Days begin at midnight luckily and the digit after the decimal point represents (logically enough) tenths of a day.

Since TOS (Trek Original Series) seems to use a different type of Star Date to the other series, we'll base our system on that used in Star Trek Next Generation (TNG). The new Enterprise series is set in the 22nd century (before TOS) and doesn't seem to use stardates as such.

The first episode of TNG is set in the year 2364, star date 41153, so if we backdate 1000 units per year we arrive at the first stardate in the year 2323.

I have seen several different methods of calculating star dates, not all of which are consistent and with no real agreement on which is best. Some of the methods assume that each year is a leap year (i.e. all Star Date years seem to correspond to 366 days).

The basic methods of calculating star dates seem to use formulae similar to the one in Figure 5.

```
Calculate number of years elapsed since start
date
Add fraction of this year elapsed so far
Multiply by 1000 to get Star Date as a whole
number
Add number of tenths of a day elapsed

6000 stardate = INT(1000*(year-start_year+
(day_of_year/365)) + (INT(10*fraction_of_day))/10
```

Figure 5. Formula for calculating Star Dates

You need to know the start year on which to base the star dates. For TNG it is 2323. If you intend to use it for 20th or 21st century, the consensus seems to be to start these off at 1947 (I don't know why).

So you start off by subtracting the base year number from the current year number then add the fraction of year elapsed so far by simply adding up days elapsed in this year and calculating it as a fraction of a full year - this may be 365, 365.25 or 366 days as you prefer. The TNG system uses 366, you may prefer to use 365.25 to allow for every fourth year being a leap year, it's not too significant. Round this off to the nearest unit and multiply by 1000 to get the star date. Finally add the number of tenths of a day elapsed as the first decimal place and you have a stardate.

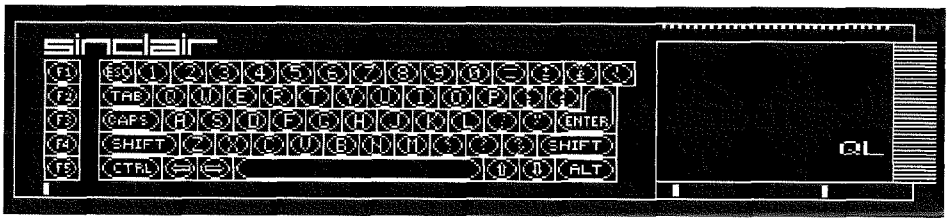
The beauty of such a system (if there is one!) is that it can support negative star dates too. So just because the TNG Star Dates system starts from 2323, it doesn't mean we can't use it in 2002 or earlier, it's just that it's a negative number.

We'll need some of the routines we've already designed. We'll call this version, designed to display present day times as Star Dates, the Negative TNG method since it is designed to display's dates as negative star dates relative to the start of the Trek New Generation series star dates.

The listing is shown in Figure 6.

```
100 REMark TNG Star Dates (Negative TNG method)
110 :
120 REMark following allows you to adjust to your
    Star Trek dates method
130 base_year = 2323 : REMark Year at which Star
    Dates start
140 days_per_year = 365 : REMark 365, 365.25 or 366
150 :
160 CLS #0
170 REPeat print_star_date
180   IF INKEY$ = CHR$(27) : EXIT print_star_date
190   time$ = DATE$
200   yrs = time$(1 TO 4)    : REMark year number
210   mths= ((time$(6 TO 8) INSTR
      "JanFebMarAprMayJunJulAugSepOctNovDec")
      DIV 3)+1 : REMark mnoth number
220   dys = time$(10 TO 11) : REMark day number
230   hr  = time$(13 TO 14) : REMark hour number
240   mi  = time$(16 TO 17) : REMark minute number
250   se  = time$(19 TO 20) : REMark second number
260   star_date = yrs-base_year- (DAYS_SO_FAR
      (yrs,mths,dys)/ days_per_year)
270   star_date = INT(1000*star_date)
280   today = INT(10*(hr+(mi+(se/60))/60)/24)/10
290   star_date = star_date-today
```

DILWYN JONES



QL P.D. SOFTWARE LIBRARY SERVICE

A brand new PD software library service from QL author Dilwyn Jones. Hundreds of freeware, shareware and PD programs available on floppy disk at a price of just £1.00 per disk (or just 75 pence if you supply the floppy disk). Programs are normally supplied on HD disks unless you specifically request DD disks.

CATALOGUE

To obtain a free catalogue of the entire software library:

1. Send me a formatted HD or DD disk and return postage, or
2. Download the catalogue from my website (see address below), or
3. By email – just send me an email to ask for the catalogue as a text file.

CD-ROMs

(Also available from Q-Celt Computing in Ireland)

QL EMULATORS CD **£5.00** - All of the available QL emulators!
QL PD-CDR **£5.00** - Gérard Plavec's software collection!
LINE DESIGN CLIPART CD **£10.00** - Huge collection of Line Design clipart!
FAMOUS FACES CD **£10.00** – Line Design pictures of the famous!
QL RELIGION CD **£10.00** – A collection of bibles, religious texts, clipart etc
DJ PD LIBRARY CD **£10.00** – The entire PD library on a CD! Start your own!

The CD-ROMs are supplied in QXL.WIN format on an ISO-9660 CD-R for use with QXL, QPC, QemuLator v2, uQLx, Q40, Q60 (systems able to read QXL.WIN media)

POSTAGE UK/Europe: add £1.00, Rest Of World: add £2.00.
PAYMENT In UK Pounds Sterling currency. Cheques payable to DILWYN JONES.

Dilwyn Jones, 41 Bro Emrys, Tal-y-bont, Bangor, Gwynedd, LL57 3YT, U.K.
Email:dilwyn.jones@dj.softnet.co.uk
Website: http://www.soft.net.uk/dj/index.html

Note: Although this service is run by the editor of QL Today magazine, it is a completely separate venture which has no connection with the publisher of this magazine. Software is supplied free of charge, apart from copying and media charges etc to cover costs, and without any warranty other than to the replacement of defective media (e.g. "bad or changed medium" errors etc.).In other words, usual PD library terms. E & OE.

```
300   AT #0,0,0 : PRINT #0,star_date
310 END REPeat print_star_date
320 STOP
330 :
340 DEFine FuNction DAYS_SO_FAR (yr,mth,dy)
350   LOCal total
360   total = 0
370   SELect ON mth
380     =2  : total = 31
390     =3  : total = 59
400     =4  : total = 90
410     =5  : total = 120
420     =6  : total = 151
430     =7  : total = 181
440     =8  : total = 212
450     =9  : total = 243
460     =10 : total = 273
470     =11 : total = 304
480     =12 : total = 334
490   END SELect
500   IF mth > 2 THEN total = total + LEAP_YEAR(yr)
510   total = total + dy
520   RETurn total
530 END DEFine DAYS_SO_FAR
540 :
550 DEFine FuNction LEAP_YEAR (year)
560   LOCal leap
570   leap = 0
580   IF (year MOD 4) = 0 AND NOT (((year MOD 100)
      = 0) AND ((year MOD 400)  > 0)) THEN leap = 1
590   RETurn leap
600 END DEFine LEAP_YEAR
```

Figure 6: The Negative TNG Star Dates routine

You can play with this to adjust it to your preferred method of calculating Star Dates. Since Star Dates are fictional creations, you can come up with your own system!

Here's another listing, this time designed to show Star Dates as positive numbers for the present day! This is called the Starfleet Command method, and the difference is that the calculation is based on starting at 1947, each year is assumed to have 366 days but of course you never get to the 366th day unless it's a leap year. There are some minor differences in the method of calculation.

Figure 7 shows the basic calculation method, compare it with Figure 5. Star Dates start from 1947. Numbers are rounded down instead of up, and years have 366 days.

```
Calculate number of years elapsed since start date
of 1947
Add fraction of this year elapsed so far
Multiply by 1000 to get Star Date as a whole number
Add number of tenths of a day elapsed

6000 stardate = INT(1000*(year-1947+ (day_of_year/
366)+0.5) + (INT(10*fraction_of_day))/10
```

Figure 7. Formula for calculating Star Dates

And Figure 8 shows the modified listing for generating Starfleet Command dates for the 20th and 21st centuries. Note how years are based on 366 days and 29 days in February!

```
100 REMark StarfleetCommand Star Dates (1947 method)
110 :
120 REMark following allows you to adjust to your
    Star Trek dates method
130 base_year = 1947 : REMark Year at which Star
    Dates start
140 days_per_year = 366 : REMark 365, 365.25 or 366
150 :
160 CLS #0
170 REPeat print_star_date
180   IF INKEY$ = CHR$(27) : EXIT print_star_date
190   time$ = DATE$
200   yrs = time$(1 TO 4)    : REMark year number
210   mths= ((time$(6 TO 8) INSTR
      "JanFebMarAprMayJunJulAugSepOctNovDec")
      DIV 3)+1 : REMark mnoth number
220   dys = time$(10 TO 11) : REMark day number
230   hr  = time$(13 TO 14) : REMark hour number
240   mi  = time$(16 TO 17) : REMark minute number
250   se  = time$(19 TO 20) : REMark second number
260   star_date = yrs-base_year+ (DAYS_SO_FAR
      (yrs,mths,dys)/ days_per_year)
270   star_date = INT((1000*star_date)+.5)
280   today = INT(10*((hr+(mi+se/60)/60)/24))/10
290   star_date = star_date+today
300   AT #0,0,0 : PRINT #0,star_date
310 END REPeat print_star_date
320 STOP
330 :
340 DEFine FuNction DAYS_SO_FAR (yr,mth,dy)
350   LOCal total
360   total = 0
370   SELect ON mth
380     =2  : total = 31
390     =3  : total = 59
400     =4  : total = 90
410     =5  : total = 120
420     =6  : total = 151
430     =7  : total = 181
440     =8  : total = 212
450     =9  : total = 243
460     =10 : total = 273
470     =11 : total = 304
480     =12 : total = 334
490   END SELect
500   REMark StarfleetCommand years always have 29
      days in February!
510   IF mth > 2 THEN total = total + 1
520   total = total + dy
530   RETurn total
540 END DEFine DAYS_SO_FAR
```

Figure 8: Starfleet Command star dates listing (1947 method)

And finally, a tiny little competition with no prizes except perhaps seeing your name in print in QL Today. As we have decimalised just about everything in sight apart from time, here comes the definition of DDT (Denham Decimal Time). The first QL based improvement in time.

It's actually based on something a friend found on the internet, but adjusted to suit our needs.

Denham Decimal Time - The Definition

The UK will shortly be converting to metric time, the actual date of conversion to be announced at a later time (probably to coincide with a new volume of QL Today).

When formally introduced, there will be no more ridiculous arithmetic based on 12s, 24s and 60s. Sadly, as even the QL cannot manipulate the path of earth around the run, we are forced to continue with the present length of year as 365 or 366 days.

Within that, though, the system shown in Figure 9 will be introduced.

OLD TIME UNIT	NEW TIME UNIT
1 second	1 milliday
1 minute	1 centiday
1 hour	1 deciday or 1 millimonth
1 day	1 deciweek
1 fortnight	* withdrawn *
1 month	1 hectoday
1 year	1 kiloday

Figure 9: Proposed new time units

See if you can come up with a basic program which will display the time using the method shown. DO bear in mind, though, that it will not be too far from April 1st when you see this in print...

If you can't quite grasp that one, try this. An astronomical year is 365 days, 5 hours, 48 minutes and 45.974 seconds. A present day based on 24 hours of 60 minutes of 60 seconds is 86,400 seconds per day. 365 days consists of 31536000 seconds. Add the remainder (20925.974 seconds) and you get a "true" astronomical year of 31586925.974 seconds.

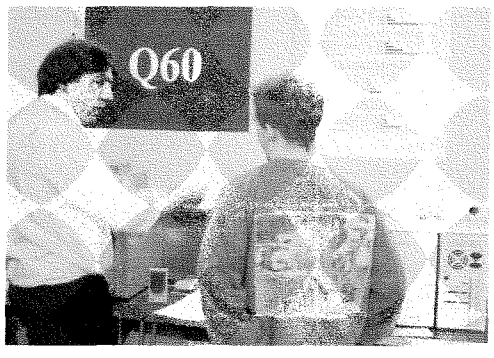
Devise a system which gives a true year date, preferably a decimal system. Bear in mind that the length of day may need to be the same or similar as the present day for daylight purposes. I'll see if I can persuade the editor to publish the best ones received. Am I asking the impossible?

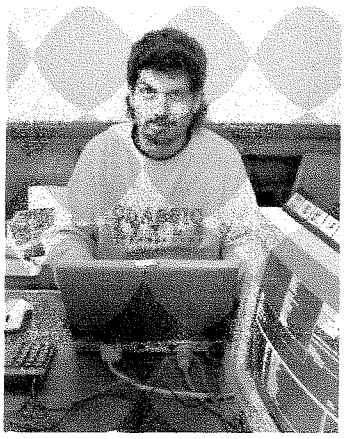
More next issue, with a look at the Zeller's Congruence method of calculating dates, assuming I understand it myself by then!

Hove Workshop 2002

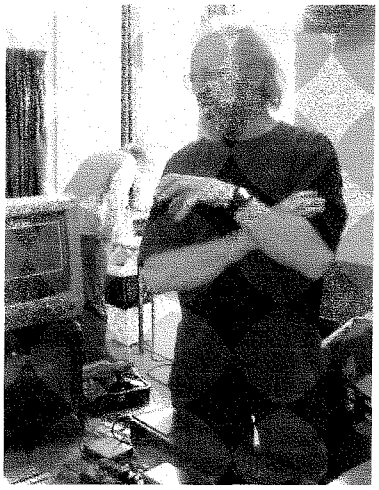
Bruce Nicholls

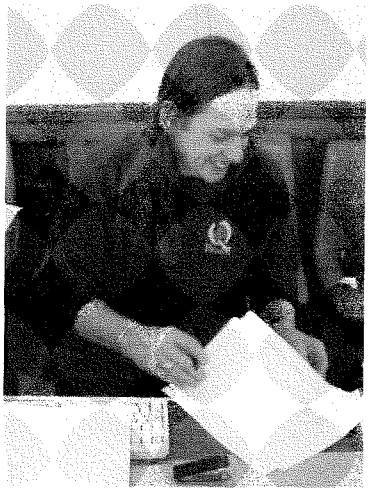
A few weeks ago saw the annual pilgrimage down to the south coast for the Hove Workshop.This year the journey down proved uneventful and for once the sun shone (You can never trust the great British Weather to be in season). The usual commercial suspects were lining up for interegation .These were TF Services (Tony '6 Shed' Firshman), Just Words (Geoff 'Trains late again' Wicks), Dilwyn 'I hate PC's & Epson' Jones, QCelt (Darren 'I was working till late - Honest' Branagh, Jochen 'crisps' Merz with co hort Marcel 'Pizza' Kilgus and a new (well welcomed addition) D&D 'Mines faster than yours' Systems. Quanta were in attendance with Bill Newell and John Taylor manning the stand. Throughtout the day we were treated to a full ensemble of catering delights from the Wood family members. There was such a rush on food this year that several 'top up trips' were needed to keep up with the ravenous hoards (a very good sign the QL scene is still active) which kept the catering team busy. Most attention of this show was taken by D&D systems who had on display





the new Q60 and Q40i machines from the Graf brothers. These are now available in Kit form or full systems built to your specification, I'm sure there is a full advert in this Issue (suitable photograph enclosed). A new version of QPC2 v3 was released at the show which corrected a 'feature' in the Dos device and Marcel was taking requests for the next version. It was good to see there is still a lively interest in the QL shows and if your near one do take time to attend.





Bringing scrap and stuffer together

Marcel Kilgus

The QPC users among you will know that QPC can keep the Windows clipboard and the scrap buffer of the menu extensions in sync. This comes in very handy if you need to cut and paste something from Windows to an application that uses the scrap, usually QD. But sometimes I found it very annoying to cope with applications that do not use the scrap extension. In this case it would be much better to have the text in the stuff buffer of the hotkey system so it can be pasted into every application simply by pressing ALT+space.

Instead of writing many lines of assembler code to extend QPC's SyncScrap function I just spent one minute to create 10 simple SBasic lines which check the scrap buffer for changes once per second and update the hotkey stuff buffer if necessary. The program can be EXECuted and will then just run in the background without consuming much processor time. I hope this is as useful to some of you as it is for me:

```
100 JOB_NAME 'SyncStuff'
110 OPEN#3,con_0x0a0x0
120 OldCnt% = SCRAP_CNT
130 REPeat
140   IF SCRAP_CNT <> OldCnt% THEN
150     HOT_STUFF SCRAP_GET$
160     OldCnt% = SCRAP_CNT
170   END IF
180   PAUSE #3,50
190 END REPeat
```

RWAP SOFTWARE

QL Cash Trader v3.7 £5

A well established accounts package for the small to medium sized business, including automatic generation of profit & loss account, balance sheet, VAT returns, reports and analysis for audit trails and management decisions. Previously sold for over £100.*

QL Payroll v3.5 £5

Manage a payroll for a small to medium sized business. Handles up to 99 employees easily, producing P45s and P60s as well as the payslips on a monthly or weekly basis. Calculates tax and national insurance and is easy to update to take account of the current tax year rules.

Q-Help v1.06 £10
Q-Index v1.05 £5

Q-Help: on-screen help for SuperBASIC commands, including TK2, Turbo Toolkit, SMSQ/E and PD toolkits. Can be used to add help to your own programs - simply produce ASCII text for each help page, add an index and Q-Help automatically cross-references and displays the links.
The PD toolkits referred to are available for £2.
Q-Index: The SuperBASIC index supplied with the Reference Manual - enter a topic such as 'screen resolution' and find out the commands which relate. Launch Q-Help for further info on the chosen command.

Sidewriter v1.08 £10

Produce landscape printouts of Easel/Qspread spreadsheets and output from QL Genealogist, as well as any other standard text file. You can specify the fonts to be used on the page. Works with all EPSON compatible printers, from 9 pin dot matrix to laser printers. A most useful utility by Dilwyn Jones - you know it must be easy to use.

ProForma ESC/P2 Drivers v1.04 £8

New improved colour and monochrome printer drivers, providing up to 720dpi for all progra written for use with ProWesS, such as LineDesig Paragraph. Works on all Epson inkjet print support binary mode compression (740, 8 models at least). 1440 dpi to follow.

QL Genealogist v3.26
Genealogy For Windo

Store your family tree f with details of their p those links build u Text files and individuals a the perfect QL versi as all Samp PC ver appear i these. QL PC version. Both program step tutorial.
** QL USERS upgrade to PC version for £25 ONLY **

D-Day MKII v3.04 £10
Grey Wolf v1.8 £8
War In The East MKII v1.24 (Upgrade Only) £5

For the gaming enthusiast - D-Day is a classic table top wargame for one or two players - you control either the Allies or the Axis forces during WWII. With the ability to define your own army set ups and a choice of 4 different scenarios, this should keep you entertained for a while.
Grey Wolf is a graphical simulation of a submarine - can you sink the enemy shipping whilst avoiding their planes and destroyers??

Image D v1.03 £10

Produce graphical representations of 3D objects - view them as wireframe, hidden line and shaded. Perspective and magnification can be controlled and views can be saved to file for subsequent printing. Multiple objects can be defined and positioned relative to each other. Simple to use yet produces excellent results.

SBASIC/SuperBASIC Reference Manual £40
Updates £6 each, £10 for 2 (Current Version - Rel 4)

Have you ever tried to write a program, but been lost as to the means of performing a certain action? This Reference Manual provides you with a full description and examples of how to use all of the keywords found on each of the different QLs, plus SMSQ/e, Toolkit II and many different public domain toolkits. Details of any possible problems are provided, together with descriptions of how to use the device drivers and how to ensure that your programs are compatible across the range of QL platforms.
This book is ideal for all QL users and is kept up to date with regular updates.
Orders are currently being taken for the next print run of this popular tome.
(Note: Price for the book does not include post & packing).

QL Cosmos v2.04 £5

Ever wondered what the stars in the sky looked like 100 years ago? Or, maybe you want to learn the constellations and names of what you see in the sky. This is the progra for you - generates pictures of the stars and planets for given place or time and provides details on these Includes Halley's Comet, the Moon and the Sola planets.

Q-Route v2.00
Upgrade from v1.xx

The latest version of this popul Find the quickest route or th two places, using roads. A for this program (see els is easy and quick to u and roads to the m

Flashback only) £5

The ultima easy to QL o in

at output in any way, including
only available as an upgrade from
original still available from Sector

Eden v3.08 £10
MKII v2.03 £8
rawn v2.01 £8
rrorday v3.1 £8
West v2.00 £5
The Lost Kingdom of Zkul v2.01 £5

A wealth of QL adventures - mainly text only.
Save the Galaxy from the ambitions of the evil dictator Nemesis.
Battle against werewolves and dracula look-alikes on a Hammer Horror set in the comical Horrorday.
Take the part of a prawn with a hangover, lost in a strange land in the hilarious Prawn.
Solve a bank-robbery by fighting the bad guys and collecting the loot in real-time old West.
Battle countless dwarves in the atmospheric Lost Kingdom of Zkul.
Return to Eden is a massive adventure over 3 disks with colourful graphics - control 3 characters in their quest to find the missing Prince.
All six adventures are available together for only £25.

A range of games to keep both the young and the young at heart amused. Some are old favourites, like Golf and a pub quiz program (500+ questions). Others are fast, colourful arcade games. Flight simulator also now available. Plenty of variation and skill required - what more can you ask for? All 6 programs only £28.

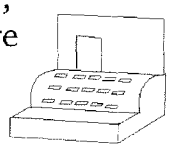
If v5.20 £8
r II v2.07 £5
er II v2.00 £5
ne v1.2 £5
Strike v1.5 £5
Fightdeck v1.05 £10

The latest maps for Q-Route. Maps o areas of Britain have been created by them out of Big Britain Map - they will us memory and can contain more detail. A covered: Scotland, NE England, NW Englan S&W Yorkshire, Wales & Derbyshire, London area and South England.
Latest version of Q-Route is recommended.

Britain.map v1.11 £2
BIG Britain Map (needs 2MB) v2.03 £5
Various Britain Area Maps (ask for details) £2 ea.
Ireland Map v1.00 £5
Belgium Map v1.01 £2
Catalonia Map v1.03 £2

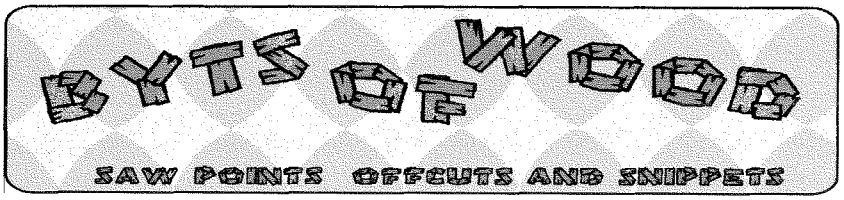
* SBASIC Reference Manual now Rel 4 - covers colour drivers *
New versions of Q-Help, Q-Index and ESC/P2 ProWesS printer drivers
*** Watch out for QWord - Coming soon ***

RWAP Software, 7 Common Road,
Kinsley, Pontefract, West Yorkshire
WF9 5JR
TEL: 01977 614299



Cheques in £sterling payable to 'R.Mellor'

* Also known as Trading Accounts



Here we are at the end of volume 6 of this magazine. I am glad that you are all still with us and I hope that you will all be renewing your subscription for another year (hint hint). What would I do with my time without Jochen breathing down my neck to get the finished copy for this column. As usual I am putting the finishing touches to the column just hours before the deadline which is just days before it goes to press and gets sent out to you. At least it is current.

Defrag That User Group!

As You all should know I read the QL Users Group most nights (when the PC is not having a nervous breakdown as it has been recently). I have ambivalent views about it. Some of the discussions that get going are intensely technical and some are very concentrated on the minutiae of the programmers art. Some of these are a wonder to read especially when experts like Nasta and others get involved. There are others which verge on the boring or repetitious because, either one of the parties involved has missed a previous version of the discussion or because some of the writers are of the Bulldog persuasion and won't drop the bone even when everyone else has said it is only a stick. You can gloss over these (before the eyes glaze over) but it must be a bit galling for those with a slow connections to download a lot of stuff that is of no interest to them.

At other times, however, it fulfils its function wonderfully. Providing help and enlightenment to those who need it. I, myself, have always regarded it as the cybernetic equivalent of the chat in the pub after a QL show and I tend to tolerate the 'off topic' stuff in the same way as I do the 'on topic but very tedious'. Sometimes the 'off topic' can be very funny and sometimes it can even be very informative. I do tend to take my anorak off at times and I do see something of life out side of the glass goldfish bowl that I spend so long staring at (must get a flat screen). Recently there was a discussion of computer viruses started because one of the contributors to the list also contributed a virus and that led some people to go into great lengths to explain how to avoid them and and, better still, how to stop yourself passing them on. Now I happen to think that is very valid and, although the QL or any QDOS/SMSQE system are not targets for these attacks, a large number of people are using QPC 2 (and I do not want to get back into the QPC2 vs the world argument here). This means they are running the system on a PC and are, by that, vulnerable. Given that many of them bought a PC to get email, web access and a QL all in one box and that most are not as well versed in the arcane mysteries of the PC as those who have to struggle with it daily, any knowledge of this nature that is imported to them will make all of our lives easier.

The upshot of the argument was that certain people threw their toys out of the pram and ran off to another playpen. A comment of 'Enough is enough please carry on the discussion privately' is fine but a lie down tantrum of the 'I didn't want to play with you anyway' variety is uncalled for.

A similar spat happened a while ago with people calling for less LINUX / Q40 stuff on the list and that moved over to the **ql-developers** list. Even further back in time another person (no names - no pack drill) called for us all to abandon the **ql-users** list and go onto the Maus group which was echoed on the BBS and thus available to non-connected users. In response to the recent spat Dave Parks set up the QL-Chat forum for those of us who want to do just that.

All of this means that we now have four possible places to ask for help and discuss things. The **ql-developers** one chugs along quite happily its user base and there is still a fair amount of traffic in the **ql-users** one. The Maus group is dominated by the occasional sex ad and nothing else and I have yet to get a message on the **QL-Chat** one. So where does all of this leave us? Fragmented, in a word. Just as in the wide world outside intolerance has driven us into enclaves where we can say what want and not be called heretics or frivolous

Ink - again

Most of the information for this section came from Rich Mellor who is still sick but has been badgering EPSON for a few crumbs of information. The upshot of his quest is revealed here.

To start with, as previously suspected, EPSON have quietly

changed the standard for ESC/P2. Up till now it has been available from DOS, Windoze and any other flavour of operating system for which someone has written a driver. Now it is only available from Windoze. This means that although you can print with one of the new printers from the QL it will only print in black and white. Previous versions of the driver, right up to Stylus 880, would accept the standard codes as shown in the ESC/P2 programmers manual but the new C80 uses different codes for colours so, as Henry Ford once said, 'choose any colour you like so long as it is black'. This is intensely annoying and it took Rich a few weeks to get the information out of them. To my mind if you want to have a new standard call it something else. The trouble is that they can't think beyond Windoze users and, to be honest, us awkward types who want to use a system that is not 'normal' are in a very small minority so why should they bother ?
Rich is hoping to get to grips with the new codes and I will bring you any information about this as soon as we have it. In the meantime there are two printers still available that do use the current codes. These are the Stylus 1520 and 3000. I believe that both of these are wide carriage printers which means, of course, that they are a lot more expensive than the others.
This is all a great pity because the C80 I have is a very good, fast and quiet printer. There is one drawback with Epson printers and QPC2 and that is the way that EPSON installs its own printer port on the PC. This has had the effect with both the Stylus 740 and the C80 of having the code sent to the driver but then doing little but activating the head and flashing the light. If you connect the same printer to the Q 40 and use the same QL printer driver (ie in QD or ProWess) then it prints. Rich Mellor has a Stylus 740 and I have just built him a PC so he may be able to shed some light on this problem too.

I suppose that EPSON will discontinue the above two ESC/P2 printers as soon as they read this (I know all the big companies read my column!).
Ho Hum, paranoid, me ?

No Place Like Hove

Most of the period between the last issue and this one has been taking up with preparations for the Workshop in Hove. This has been my pigeon for the last seven years and, although it does not take a lot of actual physical work, there is a lot of behind the scenes organisation, phone calls and hunting out hotels.
This year I have to apologise to Dilwyn and his wife. They called me to ask about hotels and I had two on my list so I recommend one to them. Of course, you never stay in a hotel in your own town unless you are indulging in a bit of 'the old extra marital' or have been found out doing it. This means that I had no real idea how good the hotel was. It looked OK and the last people I sent there said it was fine but it seems that the room that Dilwyn got was 'like a junkies bedroom' and the lock on the door did not even work. I must look further into the hotel situation for next year's show. Mea Culpa - sorry.
Apart from that the show went well. There were more people there than the previous year when the Foot and Mouth outbreak, bad weather and general transport chaos combined to keep the numbers down. This year my wife again provided the catering and was joined by all three of my daughters. My eldest travelled down from London especially to help out and to keep the baby occupied. My thanks to them all. Thanks also to Valerie Taylor who jumped in and helped out in the sandwich making process.
Geoff Wicks had some trouble getting down from Basildon by train and asked me why I always arranged these shows to coincide with rail disruption. This being England it would be hard to find a weekend when the trains were running so I must plead not guilty on that score.
The usual culprits were there with the welcome addition of D & D systems who have taken over the supply of the Q40 / Q60. Marcel was there too and did some work on QPC 2 over in the corner of the room as well as trying to sort out my own printing problems. (see above)
There were a lot of conversations about the state of QL software and the things which are now desperately needing attention. These were continues for a while in the pub up the road after the show and at my house later that night. As a result a few very important things were set in motion.

Use the Source Luke (or Marcel)

Marcel is one of the few people who have access to the source files for SMSQ/E and, while he was at the show, he tried a few tweaks to the Q 40 SMSQ code to see if he could achieve a couple of things. (I

am not going to ask why the version of SMSQ/E that runs fine on the D & D Systems machine locks mine up)
One thing Jochen, Marcel and I discussed on the night before the show was the implementation of the colour drivers and how the Window Manager could be adapted to use the colour palette. This project has been something that Tony Tebby has been going to do for some time but it has, so far, not appeared. Jochen and Marcel asked around at the show about how the users would like to see it implemented and the discussion was thrown open on the Internet in the weeks following the workshop.
I wondered if it would be possible to have a mode 4 box inside the colour version of SMSQ/E, in a similar way to the DOS box used in Windoze. This would allow programs which do not display properly under the colour drivers to run correctly without having to reset and run in 512 x 256. This may, of course, not really be feasible but it is a starting point. Marcel and Jochen have taken on the task of adding colours to the window manager and are looking into the prospect of other changes to the way that the whole of SMSQ/E operates. To that end the discussion was thrown open onto the internet group forum.

..... But Be Careful How You Shake It.

Once out in the open there were a lot of excited comments and suggestions. Many of these returned to the old saw of 'Open Source'. Tim Swenson, among others, would like to see the code made open source and suggested the way that this could be managed. The problem I have with Open Source concepts is mainly that this is a committee system in a very thin disguise - and well all know how well committees work don't we ?
The idea behind this is that people submit their changes to the code to an adjudicator and he decides if it should be included in the final distribution. The task of sorting and testing the fragments and changes is a very onerous and time consuming one. the people who would be the natural choices for this are Jochen and Marcel, both of whom have limited time on their hands to undertake the task. Tim suggested that Simon Goodwin was approached to take this on but Simon has not had the experience of dealing with SMSQ/E that Jochen and Marcel have had and has never shown any inclination to write stuff for the Pointer Environment.
Of course all of this may be a premature discussion because, at the time of writing, the code remains very firmly in the hands of Tony Tebby. Wolfgang Lenerz did say that TT was not opposed to it be open source 'in principle' but that is a far cry from his saying 'here is the code - do what you want with it'.
If the code ever becomes freely distributable and open to adaptation what could we expect? The answer to this is not really obvious. ProWess became freely distributable open source some time ago and I am completely underwhelmed by the number of people who have done anything at all with it. You can count them on the fingers of one foot. SMSQ/E could prove different here because it is such a fundamental building block for the system but that should make it even more imperative that it is controlled and tested.

And What Is Sauce Without a Main Course?

The trouble is that many of the people who really want to change things have ideas which may cause conflicts within the system - especially when you take the older software into account. Now I am all for progress here and it is not that the system is carved in stone but many of the current users rely on programs which were written a long time ago. You may well dismiss this because they will not be taking up the new system anyway but that is too simplistic a viewpoint.
With my other hat on - as a trader - I know how many of the users still rely on Quill, Archive and some of the other pieces of 'heritage' software. I know that I have mentioned this before but I do want to make a point before the excitement reaches fever pitch on this. It is no good producing a brilliant version of SMSQ/E with more bells and whistles than a Morris Dancers outing to an 80's disco if that version will then cripple the older software. I was very pleased with the Q 40 when SMSQ/E first started to be stable enough to run the programs that I use in my normal everyday working environment. The crunch came when the colour drivers were implemented with mode 4 being available. This immediately stopped me from using some of the older programs such as Text 87. This is a prime example of how progress pushed the user backwards. A seismic change in the fundamental core of SMSQ/E could magnify this effect.
I welcome change but let us tread carefully.

Break Out Of The Prison - Anyone Got a File With a Cake In It?

In recent months Pheobus L Dokus has been providing users with small IDE devices which will take the Compact Flash Card used by digital Cameras and some other small handheld computers and PDAs. These are in fact a kind of RomDisq for multi platform devices. It is very useful to be able to plug a 128Mb storage device into a camera or PDA, write to it, and then take it out and read it on a PC. There has been a remarkable degree of file consistancy across the platforms. Would it were so for us.

I got one of these from Pheobus and I am now considering how to use it. If I use it on the Q 40 I will have to format it in the Atari format in order to be able to write to it. If I then remove it and plug it into the the multi-card reader I have on the PC I cannot see it because it is not a recognised format. The same is true in reverse although I suspect that I could do something with QXL Tools/ I have not, as yet, had the time to look into this fully so it sits, unused, on the shelf.

What I would like to see is a portable file format and a program to write and read from it. OK here is the challenge (and this is where the title of this section comes from). We need a nice commercial / shareware / freeware program which could, when run, read a native QL file system in one pane and a new portable file system in another. This could then transfer the files from one to the other. Alternatively we need a way t read QXL.win files on a Q 40 and a standard Qubide equipped QL. Maybe this all exists and some of you have done it all already. If that is true then write it up and get it in the magazine because there are so many people who want to see it.

Honourable Mentions in Despatches.

Just a small medal here but I have to award it to Marcel for adding the ability to use a scrolling wheel mouse in QPC2. I have used one of these for ages on my PC at home and on the one at work and I keep reaching out to use it on the QL systems. Now we need to be able to add it to super-Hermes and the Q 40 as well as being able to find a scroll mouse that is not PS/2!

Its Ram, Jim - But Not As We Know It

A while ago one of the customers in my normal day job was chatting to me about shareware. I am a great lover of shareware for the PC and I use a lot of it. Sadly the trend towards cracking codes which has allowed many people to use Windoze and other M$ products to be available for free has also poached into this territory. Someone called me the other day and said that he had a crack for a program which cost a mere £ 20.00 and this is a sad state of affairs for both programmer and user, I think. Luckily we, in the QL world, do not suffer from this activity. How would these people feel if someone got a 'crack' for their car and went joyriding around the town I wonder?

The shareware he was enthusing about (I cannot remember its name) provided him with a 'virtual disk in memory' He seemed quite excited about this and so I asked him about it. He said it was a piece of software which allowed him to create a disk in memory to write to. I said 'this is a kind of RAM disk then?' 'Yes,' he replied 'great idea and so useful'. Smugness took over, I am afraid, I asked if you had to set how big the virtual device was and he said that it had to be set up when the drive was initialised and this was the main drawback.

'We've had them on the QL since 1985', I said, 'Only ours are dynamic.These PCs are so primitive'

Oh it felt good!

HAVE YOU FILLED IN THE RENEWAL FORM YET?

The QL Show Agenda

Quanta AGM and Workshop - (UK)

Manchester. A 2-day event on saturday 13th and 14th April 2002,
Venue: 3rd Davyhulme Scout Headquarters,
Conway Road, off Lostock Road.
Public from 2pm Sat and from 10am Sun. AGM 2.00pm Sunday

North American US Show 2002

Saturday, 1st of June

This time, the event takes place near Washington:
Park Inn in Oxon Hill, Maryland.
The Park Inn is a newly renovated motel just off the I-95/I-495 beltway around Washington, D.C. just north of the Potomac

For details, please check page 6 of previous issue.

QL Meeting - (NL) Eindhoven

Saturday, 22rd of June, 10:00 to 16:00
Pleincollege St. Joris, Roostenlaan 296

After last year's succes:

German QL Show - (D) Berchtesgaden

Two-Day Event, Sat./Sun, 5th/6th October
Same venue as last year: Hotel Schwabenwirt.
More details will be in the next issue of QL Today.
You can also check back-issues of QL Today, as everything will be the same (including wonderful mountains, a nice lake, great views and, of course, nice weather)